

=> fil reg

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STRUCTURE FILE UPDATES: 3 MAR 2010 HIGHEST RN 1207829-36-4
 DICTIONARY FILE UPDATES: 3 MAR 2010 HIGHEST RN 1207829-36-4

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TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

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REGISTRY includes numerically searchable data for experimental and
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 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

=> d que

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L2          20 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  (1333-74-0/BI OR
              15318-08-8/BI OR 19553-62-9/BI OR 20791-15-5/BI OR
              310888-77-8/BI OR 310888-80-3/BI OR 310888-81-4/BI OR
              310888-82-5/BI OR 310888-85-8/BI OR 310888-87-0/BI OR
              7358-26-1/BI OR 7440-37-1/BI OR 7440-59-7/BI OR 75-24-1/BI
              OR 7727-37-9/BI OR 870126-56-0/BI OR 870126-57-1/BI OR
              870126-58-2/BI OR 870126-59-3/BI OR 97-93-8/BI)
L7          1182 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  C19H14N2O2/MF
L9          24 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L7 AND 8-QUIN?
L10         11 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L9 AND QUINOLINOL
              ?
L11         10 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L10 NOT
              1H-INDOLE?
L12         1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  8-HYDROXYQUINOLIN
              ATE/CN
L13         1 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  8-HYDROXYQUINOLIN
              E/CN
L14         685 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  148-24-3/CRN
L21         2 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  63969-39-1/CRN
L25         34 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  2536-71-2/CRN
L26         664194 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  (AL OR GA OR
              ZN)/ELS
L27         122588 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L26 AND CCS/CI
L28         541606 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L26 NOT L27
L29         541606 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L28 OR L28
L30         300000 SEA FILE=REGISTRY RAN=(173475-42-8) SPE=ON  ABB=ON  PLU=ON
              L28 OR L28
L31         241606 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L29 NOT L30
L32         30 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L12
L33         10124 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L13
L34         1839 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L14
L35         3 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L21
  
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10/594,762

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| L37 | 60 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L11 |
| L38 | 143270 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L27 |
| L39 | 140282 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L30 |
| L40 | 2256613 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L31 |
| L41 | 2571 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | (L32 OR L33 OR L34 OR L35 OR L36 OR L37) AND (L38 OR L39 OR L40) |
| L42 | | QUE | SPE=ON | ABB=ON | PLU=ON | CHEMICAL VAPOR DEPOSIT? OR C HEMICAL VAPOUR DEPOSIT? OR CVP OR VAPOR DEPOSIT? OR VAPOU R DEPOSIT? |
| L43 | 27 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L41 AND L42 |
| L44 | 247082 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | "VAPOR DEPOSITION PROCESS"+PFT,NT/CT |
| L45 | 28 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L41 AND L44 |
| L46 | 31 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L43 OR L45 |
| L47 | | QUE | SPE=ON | ABB=ON | PLU=ON | FILM? OR THINFILM? OR LAYER? OR OVERLAY? OR OVERLAID? OR LAMIN? OR LAMEL? OR (MULTILA YER?) OR SHEET? OR LEAF? OR FOIL? OR COAT? OR TOPCOAT? OR OVERCOAT? OR VENEER? OR SHEATH? OR COVER? OR ENVELOP? OR ENCAS? OR ENWRAP? OR OVERSPREAD? |
| L48 | 30 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L46 AND L47 |
| L49 | 130 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | (L32 OR L33 OR L34 OR L35 OR L36 OR L37) (5A) L47 |
| L50 | 5 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L49 AND L42 |
| L51 | 5 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L50 AND L41 |
| L52 | 30 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L48 OR (L50 OR L51) |
| L53 | 18 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L52 AND (1840-2006) /PRY,AY,PY |
| L54 | 565 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L41 AND L47 |
| L55 | 27 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L54 AND L44 |
| L57 | 16 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L55 AND (1840-2006) /PRY,AY,PY |
| L58 | 16 | SEA FILE=REGISTRY | SPE=ON | ABB=ON | PLU=ON | L2 AND M/ELS |
| L59 | 23254 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L58 |
| L60 | 1415 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L59 AND L42 |
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| L62 | 1 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L61 AND (L32 OR L33 OR L34 OR L35 OR L36 OR L37) |
| L63 | 1 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L60 AND (L32 OR L33 OR L34 OR L35 OR L36 OR L37) |
| L64 | 49 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L59 AND (L32 OR L33 OR L34 OR L35 OR L36 OR L37) |
| L65 | 1 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L64 AND L42 |
| L66 | 19 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L53 OR L62 OR L63 OR L65 |
| L68 | 19 | SEA FILE=HCAPLUS | SPE=ON | ABB=ON | PLU=ON | L66 OR L57 |

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FILE 'HCAPLUS' ENTERED AT 10:33:29 ON 05 MAR 2010

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FILE COVERS 1907 - 5 Mar 2010 VOL 152 ISS 11
 FILE LAST UPDATED: 4 Mar 2010 (20100304/ED)
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2009
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2009

HCAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 168 1-19 ibib ed abs hitstr hitind

L68 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2008:1127854 HCAPLUS Full-text
 DOCUMENT NUMBER: 149:366841
 TITLE: Atomic layer chemical
 vapor deposition with in situ
 synthesis of molecular metalorganic compounds and
 uses of the resulting films
 INVENTOR(S): Nilsen, Ola; Fjellvaag, Helmer
 PATENT ASSIGNEE(S): Universitetet I Oslo, Norway
 SOURCE: PCT Int. Appl., 25pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

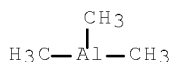
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| WO 2008111850 | A2 | 20080918 | WO 2008-NO99 | 20080314 |
| WO 2008111850 | A3 | 20090129 | | |

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY,
 BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE,
 EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN,
 IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT,
 LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK,
 SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
 VN, ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR,
 HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
 NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ,
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 EP, OA

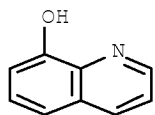
PRIORITY APPLN. INFO.: NO 2007-1400 A 20070315

ED Entered STN: 19 Sep 2008

- AB Methods for preparing thin films comprising mol. metalorg. compds. on a substrate using an atomic layer gas phase deposition technique are described which entail contacting the substrate with a pulse of an inorg. precursor selected from a group consisting of metal alkyls, metal cycloalkyls, metal aryls, metal amines, metal silylamines, metal halogenides, metal carbonyls, and metal chelates; reacting the inorg. precursor with an organic compound present on at least one surface of the substrate or adsorbing the inorg. precursor on at least one surface of the substrate; removing any nonadsorbed or unreacted inorg. precursors and reaction byproducts; contacting the inorg. precursor on the surface of the substrate with a pulse of an organic precursor with at least one functional group capable of a chemical reaction with an inorg. precursor; reacting the organic precursor with the inorg. compound adsorbed on the surface or adsorbing the organic precursor; removing any nonadsorbed or unreacted organic precursors; and optionally repeating the preceding steps until a desired film thickness is achieved. A layer of metalorg. compds. is formed in either one of the reaction steps. The metal is selected from Al, Ga, In, Tl, Si, Ge, Sn, Pb, As, Sb, Bi, Te, Po, alkali metals, alkaline earth metals, 3d metals, 4d metals, 5d metals, lanthanides, and actinides. Substrates provided with the films are also described, as is the use of the films as a semiconductive material in organic light-emitting device applications (including displays).
- IT 75-24-1, Trimethylaluminum 148-24-3,
8-Hydroxyquinoline, processes
(atomic layer chemical vapor
deposition with in situ synthesis of mol. metalorg. compds.
and uses of resulting films)
- RN 75-24-1 HCAPLUS
- CN Aluminum, trimethyl- (CA INDEX NAME)



- RN 148-24-3 HCAPLUS
- CN 8-Quinolinol (CA INDEX NAME)



- CC 75-1 (Crystallography and Liquid Crystals)
Section cross-reference(s): 73, 74, 76, 78
- ST atomic layer chem vapor
deposition metalorg compd film; electroluminescent
device display atomic layer CVD metalorg film
- IT Silanes
(amino, metal compds.; atomic layer chemical
vapor deposition with in situ synthesis of mol.
metalorg. compds. and uses of resulting films)
- IT Semiconductor films
(atomic layer chemical vapor

- deposition with in situ synthesis of mol. metalorg. compds.
and uses of resulting films)
- IT Actinide compounds
 - Alkali metal compounds
 - Alkaline earth compounds
 - Rare earth compounds
 - Transition metal compounds
 - (atomic layer chemical vapor
deposition with in situ synthesis of mol. metalorg. compds.
and uses of resulting films)
- IT Carbonyl complexes
 - Coordination compounds
 - Halides
 - (atomic layer chemical vapor
deposition with in situ synthesis of mol. metalorg. compds.
and uses of resulting films)
- IT Chemical vapor deposition
 - (atomic layer; atomic layer chemical
vapor deposition with in situ synthesis of mol.
metalorg. compds. and uses of resulting films)
- IT Electroluminescent devices
 - (displays, organic; atomic layer chemical vapor
deposition with in situ synthesis of mol. metalorg. compds.
and uses of resulting films)
- IT Luminescent screens
 - (electroluminescent, organic; atomic layer chemical
vapor deposition with in situ synthesis of mol.
metalorg. compds. and uses of resulting films)
- IT Amines, processes
 - (metal compds.; atomic layer chemical vapor
deposition with in situ synthesis of mol. metalorg. compds.
and uses of resulting films)
- IT Electroluminescent devices
 - (organic; atomic layer chemical vapor
deposition with in situ synthesis of mol. metalorg. compds.
and uses of resulting films)
- IT Amines, processes
 - (silyl, metal compds.; atomic layer chemical
vapor deposition with in situ synthesis of mol.
metalorg. compds. and uses of resulting films)
- IT 7439-92-1DP, Lead, compds. 7440-08-6DP, Polonium, compds.
7440-21-3DP, Silicon, compds. 7440-28-0DP, Thallium, compds.
7440-31-5DP, Tin, compds. 7440-36-0DP, Antimony, compds.
7440-38-2DP, Arsenic, compds. 7440-55-3DP, Gallium, compds.
7440-56-4DP, Germanium, compds. 7440-69-9DP, Bismuth, compds.
7440-74-6DP, Indium, compds. 13494-80-9DP, Tellurium, compds.
(atomic layer chemical vapor
deposition with in situ synthesis of mol. metalorg. compds.
and uses of resulting films)
- IT 555-32-8P 2085-33-8P, Tris(8-hydroxyquinolinato)aluminum
13978-85-3P, Bis(8-hydroxyquinolinato)zinc 17500-80-0P
(atomic layer chemical vapor
deposition with in situ synthesis of mol. metalorg. compds.
and uses of resulting films)
- IT 7732-18-5, Water, processes 10028-15-6, Ozone, processes
(atomic layer chemical vapor
deposition with in situ synthesis of mol. metalorg. compds.
and uses of resulting films)
- IT 65-85-0, Benzoic acid, processes 75-24-1,
Trimethylaluminum 143-24-3, 8-Hydroxyquinoline, processes

557-20-0, Diethylzinc 7439-89-6D, Iron, compds. 7439-95-4D,
 Magnesium, compds. 7439-96-5D, Manganese, compds. 7440-06-4D,
 Platinum, compds. 7440-47-3D, Chromium, compds. 7440-48-4D,
 Cobalt, compds. 7440-50-8D, Copper, compds. 7440-62-2D, Vanadium,
 compds. 7550-45-0, Titanium tetrachloride, processes
 (atomic layer chemical vapor
 deposition with in situ synthesis of mol. metalorg. compds.
 and uses of resulting films)

L68 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2008:379801 HCAPLUS Full-text
 DOCUMENT NUMBER: 148:415641
 TITLE: Transfer material for electronic device, method of
 forming insulating layer and partition
 wall of electronic device, and light-emitting
 element
 INVENTOR(S): Tateishi, Tomomi
 PATENT ASSIGNEE(S): Fujifilm Corporation, Japan
 SOURCE: U.S. Pat. Appl. Publ., 25 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| ----- | ---- | ----- | ----- | ----- |
| US 20080075921 | A1 | 20080327 | US 2007-902031 | 20070918 |
| | | | <-- | |
| JP 2008084701 | A | 20080410 | JP 2006-263437 | 20060927 |
| | | | <-- | |
| PRIORITY APPLN. INFO.: | | | JP 2006-263437 | A 20060927 |
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ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

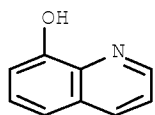
ED Entered STN: 28 Mar 2008

AB The present invention provides a transfer material with a strong adhesiveness
 for an electronic device that includes a transfer support and, provided on the
 support in this order, an insulating layer or a partition wall material layer,
 and a layer containing an organic low-mol.-weight compound having charge
 transportability; a method of forming an insulating layer and a partition wall
 of an electronic device using the transfer material; and a light-emitting
 element.

IT 148-24-3D, 8-Quinololinol, derivs. 2085-33-8, Alq3
 (transfer material for electronic device, method of forming
 insulating layer and partition wall of electronic device,
 and light-emitting element)

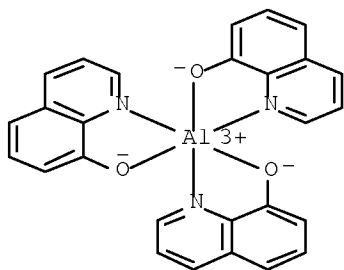
RN 148-24-3 HCAPLUS

CN 8-Quinololinol (CA INDEX NAME)



RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



INCL 428141000; 156230000; 428172000

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 48, 73

ST transfer electronic device insulating layer partition wall
LED fabrication

IT Cluster ions

(beams; transfer material for electronic device, method of forming
insulating layer and partition wall of electronic device,
and light-emitting element)

IT Anhydrides

(dianhydrides; transfer material for electronic device, method of
forming insulating layer and partition wall of electronic
device, and light-emitting element)

IT Vapor deposition process

(ion plating; transfer material for electronic device, method of
forming insulating layer and partition wall of electronic
device, and light-emitting element)

IT Materials

(organic; transfer material for electronic device, method of forming
insulating layer and partition wall of electronic device,
and light-emitting element)

IT Chemical vapor deposition

(photochem.; transfer material for electronic device, method of
forming insulating layer and partition wall of electronic
device, and light-emitting element)

IT Polymerization

Vapor deposition process

(plasma; transfer material for electronic device, method of forming
insulating layer and partition wall of electronic device,
and light-emitting element)

IT Acrylic polymers

(polysiloxane-, US-3700; transfer material for electronic device,
method of forming insulating layer and partition wall of
electronic device, and light-emitting element)

IT Conducting polymers

(polythiophenes; transfer material for electronic device, method of
forming insulating layer and partition wall of electronic
device, and light-emitting element)

IT Chemical vapor deposition

Coating process

Dielectric films

Electroluminescent devices

Holders

Molecular beam epitaxy

Reactive sputtering

Release films

Semiconductor device fabrication

Sputtering

Transfers

(transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT Metallophthalocyanines

Polyanilines

Polyesters

Polyphenyls

(transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT Vapor deposition process

(vacuum; transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT 67-63-0, Isopropyl alcohol, processes 78-93-3, Methyl ethyl ketone, processes 108-88-3, Toluene, processes 58328-31-7 60676-86-0, Vitreous silica 475644-38-3, Optool DSX 757974-86-0, TFR-H

(transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT 50926-11-9, Indium tin oxide 128770-43-4, HP 320 (polyester)

(transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT 90-44-8D, Anthrone, derivs. 92-52-4D, Biphenyl, quinone derivs.

147-14-8, Copper phthalocyanine ~~148-24-3D~~, 8-Quinolinol, derivs. 151-51-9D, Carbodiimide, derivs. 273-53-0D, Benzoxazole, metal complexes 288-42-6D, Oxazole, derivs. 288-88-0D, 1H-1,2,4-Triazole, derivs. 486-25-9D, Fluorenone, derivs.

574-93-6D, Phthalocyanine, derivs. ~~2005-33-8~~, Alq3

4425-82-5D, Fluorenylidene methane, derivs. 7789-24-4, Lithium

fluoride, processes 11120-54-0D, Oxadiazole, derivs. 12597-68-1,

Stainless steel, processes 14990-02-4D, derivs. 25038-59-9,

Lumirror T-60, processes 60475-00-5D, Thiopyran, derivs.

70359-39-6D, derivs. 95270-88-5D, Polyfluorene, derivs.

96638-49-2D, Polyphenylenevinylene, derivs. 123847-85-8

380234-99-1, ZPN 1100 693794-98-8

(transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L68 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:970780 HCAPLUS Full-text

DOCUMENT NUMBER: 147:332672

TITLE: Blue-emitting doped lithium quinolate electroluminescent materials and related electroluminescent devices

INVENTOR(S): Kathirgamanathan, Poopathy; Ganeshamurugan, Subramaniam; Kumaravel, Muttulingham; Partheepan, Arumugam; Paramaswara, Gnanamoly

PATENT ASSIGNEE(S): Merck Patent GmbH, Germany

SOURCE: U.S. Pat. Appl. Publ., 29 pp., Cont.-in-part of

10/594,762

Appl. No. PCT/GB06/000441.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|--|-------------|
| US 20070200096 | A1 | 20070830 | US 2007-732313 | 20070403 |
| | | | <-- | |
| WO 2000032717 | A1 | 20000608 | WO 1999-GB4024 | 19991201 |
| | | | <-- | |
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| WO 2003046107 | A1 | 20030605 | WO 2002-GB5268 | 20021122 |
| | | | <-- | |
| W: | | | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW | |
| RW: | | | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | |
| US 20050106412 | A1 | 20050519 | US 2004-496416 | 20040522 |
| | | | <-- | |
| US 20060003089 | A1 | 20060105 | US 2005-140338 | 20050527 |
| | | | <-- | |
| US 7597926 | B2 | 20091006 | | |
| WO 2006087521 | A1 | 20060824 | WO 2006-GB441 | 20060209 |
| | | | <-- | |
| W: | | | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | |
| RW: | | | AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | |
| PRIORITY APPLN. INFO.: | | | GB 1998-26406 | A 19981202 |
| | | | <-- | |
| | | | WO 1999-GB4024 | W 19991201 |
| | | | <-- | |
| | | | US 2001-857300 | B3 20010601 |
| | | | <-- | |
| | | | GB 2001-28074 | A 20011123 |
| | | | <-- | |

10/594,762

| | |
|----------------|-------------|
| WO 2002-GB5268 | W 20021122 |
| <-- | |
| US 2004-496416 | A2 20040522 |
| <-- | |
| GB 2005-3393 | A 20050218 |
| <-- | |
| US 2005-140338 | A2 20050527 |
| <-- | |
| WO 2006-GB441 | A2 20060209 |
| <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 147:332672

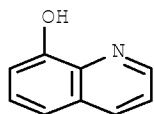
ED Entered STN: 31 Aug 2007

AB Electroluminescent composition is provided comprising (a) lithium quinolate or substituted quinolate exhibiting a blue electroluminescence and being the result of reaction between a lithium alkyl or alkoxide with 8-hydroxy quinoline or a substituted derivative thereof in a solvent which comprises acetonitrile and (b) a dopant. Also provided is an electroluminescent device which comprises sequentially (i) a first electrode (ii) a layer of an electroluminescent material which comprises lithium quinolate or substituted quinolate doped with a dopant and (iii) a second electrode.

IT ~~148-24-3~~, 8-Hydroxyquinoline, reactions
(blue-emitting doped lithium quinolate electroluminescent materials
and related electroluminescent devices)

RN 148-24-3 HCAPLUS

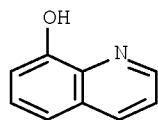
CN 8-Quinolinol (CA INDEX NAME)



IT 21302-84-1 262280-95-5
(blue-emitting doped lithium quinolate electroluminescent materials
and related electroluminescent devices)

RN 21302-84-1 HCAPLUS

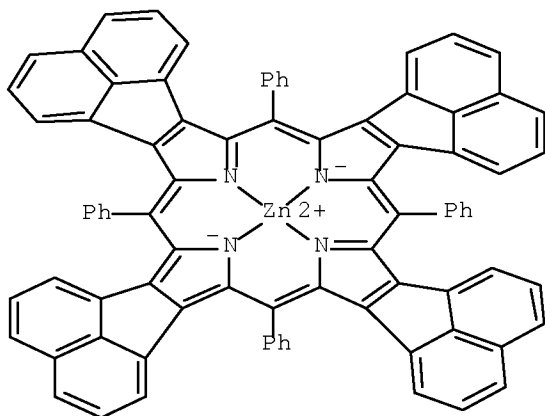
CN 8-Quinolinol, zirconium(4+) salt (4:1) (CA INDEX NAME)



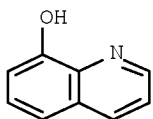
● 1/4 Zr(IV)

RN 262280-95-5 HCAPLUS

CN Zinc, [8,17,26,35-tetraphenyl-37H,39H-tetraacenaphtho[1,2-b:1',2'-g:1'',2''-1:1''',2'''-q]porphinato(2-)-
κN37,κN38,κN39,κN40]-, (SP-4-1)- (CA INDEX
NAME)



IT 25387-93-3P
 (doped electroluminescent material; blue-emitting doped lithium
 quinolate electroluminescent materials and related
 electroluminescent devices)
 RN 25387-93-3 HCAPLUS
 CN 8-Quinolinol, lithium salt (1:1) (CA INDEX NAME)



● Li

INCL 252301160; 313483000
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
 Properties)
 Section cross-reference(s): 25, 29, 76, 78
 IT Vapor deposition process
 (vacuum co-sublimation of lithium quinolate and dopant;
 blue-emitting doped lithium quinolate electroluminescent materials
 and related electroluminescent devices)
 IT 109-04-6, 2-Bromopyridine 109-72-8, n-Butyllithium, reactions
 148-24-3, 8-Hydroxyquinoline, reactions 1137-68-4,
 2-2-Pyridyl-benzimidazole 10025-83-9, Iridium trichloride
 98437-23-1
 (blue-emitting doped lithium quinolate electroluminescent materials
 and related electroluminescent devices)
 IT 147-14-8, Copper phthalocyanine 4733-39-5, BCP 21302-84-1
 21392-78-9 262280-95-5
 (blue-emitting doped lithium quinolate electroluminescent materials
 and related electroluminescent devices)
 IT 25387-93-3P
 (doped electroluminescent material; blue-emitting doped lithium

quinolate electroluminescent materials and related electroluminescent devices)

IT 7789-24-4, Lithium fluoride, uses (electron injection ~~layer~~; blue-emitting doped lithium quinolate electroluminescent materials and related electroluminescent devices)

IT 124729-98-2 (hole-transporting ~~layer~~; blue-emitting doped lithium quinolate electroluminescent materials and related electroluminescent devices)

OS.CITING REF COUNT: 0 THERE ARE 0 CAPLUS RECORDS THAT CITE THIS RECORD (0 CITINGS)

L68 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:485383 HCAPLUS Full-text

DOCUMENT NUMBER: 146:473281

TITLE: Method for producing a ~~layer~~ consisting of doped organic material on a substrate by means of deposition from a common evaporation source

INVENTOR(S): Werner, Ansgar; Leo, Karl; Boettcher, Horst; Woehrle, Dieter; Thiel, Carolin; Wark, Michael

PATENT ASSIGNEE(S): Novald A.-G., Germany

SOURCE: PCT Int. Appl., 18pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| WO 2007048624 | A1 | 20070503 | WO 2006-EP10368 | 20061027 |
| <-- | | | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| EP 1783846 | A1 | 20070509 | EP 2005-23595 | 20051028 |
| <-- | | | | |
| EP 1783846 | B1 | 20080709 | | |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU | | | | |
| JP 2009514152 | T | 20090402 | JP 2008-537009 | 20061027 |
| <-- | | | | |
| KR 2008073306 | A | 20080808 | KR 2008-712659 | 20080527 |
| <-- | | | | |
| PRIORITY APPLN. INFO.: | | | EP 2005-23595 | A 20051028 |
| <-- | | | | |
| | | | WO 2006-EP10368 | W 20061027 |
| <-- | | | | |

ED Entered STN: 04 May 2007

AB The invention relates to a method for producing a ~~layer~~ consisting of a doped organic material on a substrate by means of deposition, the doped organic material containing at least one matrix material and at least one doping material. The inventive method is characterized in that a mixture of the matrix material and the doping material in a common evaporation source is transformed into a vapor phase and deposited onto the substrate, at least one of the matrix material or the doping material being inserted into a porous carrier substance before being transformed into the vapor phase. The invention also relates to the use of 1 such method.

IT 1344-28-1, Alumina, uses 7784-30-7, Aluminum phosphate

(matrix material; method for producing a ~~layer~~ consisting of doped organic material on a substrate by means of deposition from a common evaporation source)

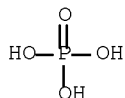
RN 1344-28-1 HCAPLUS

CN Aluminum oxide (Al₂O₃) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 7784-30-7 HCAPLUS

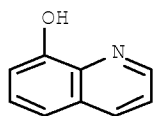
CN Phosphoric acid, aluminum salt (1:1) (CA INDEX NAME)



IT 148-24-3, 8-Oxyquinoline, uses 2085-33-8, Alq₃
(method for producing a ~~layer~~ consisting of doped organic material on a substrate by means of deposition from a common evaporation source)

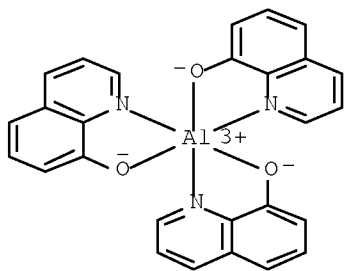
RN 148-24-3 HCAPLUS

CN 8-Quinololinol (CA INDEX NAME)



RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



- CC 76-2 (Electric Phenomena)
Section cross-reference(s): 52, 73
- ST vapor deposition doped org material solar cell
electroluminescent device
- IT Sol-gel processing
(coating; method for producing a layer
consisting of doped organic material on a substrate by means of
deposition from a common evaporation source)
- IT Molecular sieves
(matrix material; method for producing a layer consisting
of doped organic material on a substrate by means of deposition from a
common evaporation source)
- IT Zeolites (synthetic)
(matrix material; method for producing a layer consisting
of doped organic material on a substrate by means of deposition from a
common evaporation source)
- IT Doping
Hybrid organic-inorganic materials
Vapor deposition process
(method for producing a layer consisting of doped organic
material on a substrate by means of deposition from a common evaporation
source)
- IT Electric conductors
Electroluminescent devices
Materials
Solar cells
(organic; method for producing a layer consisting of doped
organic material on a substrate by means of deposition from a common
evaporation source)
- IT Coating process
(sol-gel; method for producing a layer consisting of
doped organic material on a substrate by means of deposition from a
common evaporation source)
- IT 1314-23-4, Zirconia, uses 1344-28-1, Alumina, uses
7631-86-9, Silica, uses 7784-30-7, Aluminum phosphate
12736-95-7, Aluminum phosphate silicate 13463-67-7, Titania, uses
(matrix material; method for producing a layer consisting
of doped organic material on a substrate by means of deposition from a
common evaporation source)
- IT 148-24-3, 8-Oxyquinoline, uses 517-51-1, Rubrene
2085-33-8, Alq3
(method for producing a layer consisting of doped organic
material on a substrate by means of deposition from a common evaporation
source)
- OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS
RECORD (2 CITINGS)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L68 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2006:36976 HCAPLUS Full-text
DOCUMENT NUMBER: 144:117522
TITLE: Method of manufacturing organic thin film
element, method of manufacturing electro-optic
device, and method of manufacturing electronic
equipment
INVENTOR(S): Takakuwa, Atsushi; Shimoda, Tatsuya; Furusawa,
Masahiro; Mitani, Tadaoki; Yamaguchi, Hisato
PATENT ASSIGNEE(S): Seiko Epson Corporation, Japan; Tadaoki Mitani
SOURCE: U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| ----- | ---- | ----- | ----- | ----- |
| US 20060007520 | A1 | 20060112 | US 2005-141108 | 20050601 |
| | | | <-- | |
| JP 2006024535 | A | 20060126 | JP 2004-203917 | 20040709 |
| | | | <-- | |
| PRIORITY APPLN. INFO.: | | | JP 2004-203917 | A 20040709 |
| | | | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

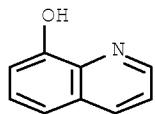
ED Entered STN: 13 Jan 2006

AB A method of manufacturing an organic thin film element including an organic thin film between a pair of thin film electrodes with ≥ 1 transparent electrode includes forming the transparent electrode by atomizing a material liquid containing a transparent-electrode forming material onto a base material; and forming the organic thin film on the transparent electrode. The organic thin film element is capable of simply providing an organic thin film element having a long element life. A method of manufacturing an electrooptic device as well as a method of manufacturing electronic equipment by using the above method are described.

IT 148-24-3, 8-Quinolinol, uses 2085-33-8,
Tris(8-hydroxyquinolinato)aluminum
(organic film electrodes manufacturing with)

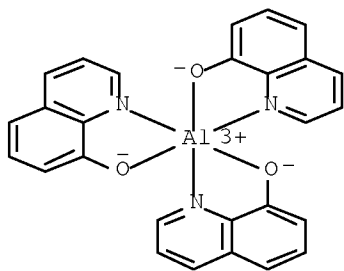
RN 148-24-3 HCAPLUS

CN 8-Quinolinol (CA INDEX NAME)



RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



INCL 359275000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 22, 76

ST org film element electrooptic device electronic equipment
manuf

IT Aromatic hydrocarbons, uses
(alkyl, polymers; organic film electrodes manufacturing with)

IT Amines, uses
Polyesters, uses
Polymers, uses
(aromatic; organic film electrodes manufacturing with)

IT Anhydrides
(heterocycle; organic film electrodes manufacturing with)

IT Film electrodes
(manufacturing with organic films)

IT Luminescence, electroluminescence
Spraying
Sputtering
(of organic film electrodes)

IT Self-assembled monolayers
(organic film electrodes manufacturing with)

IT Acrylic polymers, uses
Borate glasses
Borosilicate glasses
Coumarins
Glass, uses
Hydrazones
Phosphate glasses
Phosphosilicate glasses
Polyanilines
Polycarbonates, uses
Polyesters, uses
Polysilanes
Rare earth metals, uses
Silazanes
Silicate glasses
(organic film electrodes manufacturing with)

IT Films
(organic; electrodes manufacturing with)

IT Polysulfones, uses
(polyether-; organic film electrodes manufacturing with)

IT Polyethers, uses
(polysulfone-; organic film electrodes manufacturing with)

IT Conducting polymers
(polythiophenes; organic film electrodes manufacturing with)

IT Electrodes
(transparent; organic film electrodes manufacturing with)

IT Electronics
Electrooptical instruments
(using organic films)

IT 51-17-2, Benzimidazole 80-05-7, Bisphenol A, uses 84-65-1D,
Anthraquinone, derivs. 86-73-7D, Fluorene, alkyl derivs., polymers
90-44-8, Anthrone 94-41-7D, Chalcone, amino substitution derivative
95-16-9, Benzothiazole 106-51-4D, Quinone, derivs. 110-02-1D,
Thiofuran, oligomers 148-24-3, 8-Quinololinol, uses
198-55-0D, Perylene, derivs. 273-53-0, Benzoxazole 288-32-4,
Imidazole, uses 288-42-6, Oxazole 288-88-0, 1H-1,2,4-Triazole
289-72-5D, Thiopyran, derivs. 290-37-9D, Pyrazine, styryl derivs.
486-25-9, Fluorenone 486-25-9D, Fluorenone, derivs. 588-59-0,
Stilbene 919-30-2, Aminopropyltriethoxysilane 2085-33-8,
Tris(8-hydroxyquinolinato)aluminum 4425-82-5, Fluorenylidene methane
7439-93-2, Lithium, uses 7439-95-4, Magnesium, uses 7440-23-5,
Sodium, uses 7440-74-6, Indium, uses 9003-53-6, Polystyrene
9011-14-7, PMMA 11120-54-0, Oxadiazole 12033-89-5, Silicon
nitride, uses 25038-59-9, uses 25067-59-8, Polyvinylcarbazole
25087-26-7, Polymethacrylic acid 25265-76-3, Phenylenediamine
36118-45-3, Pyrazoline 37271-44-6 39455-90-8, Pyrazolone
42559-81-9, Anthracene-styrene copolymer 60676-86-0, Silica glass
65181-78-4, TPD (photoreceptor) 96638-49-2, Polyphenylenevinylene
(organic film electrodes manufacturing with)

L68 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:345979 HCAPLUS Full-text

DOCUMENT NUMBER: 142:381971

TITLE: Organic electroluminescent devices employing an
organometallic complex-containing layer
adjacent to a reducing metal and fabrication
process of electroluminescent devices

INVENTOR(S): Kido, Junji; Matsumoto, Toshio; Nakada, Takeshi;
Kawamura, Norifumi

PATENT ASSIGNEE(S): International Manufacturing and Engineering
Services Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 33 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| EP 1524707 | A2 | 20050420 | EP 2004-24611 | 20041015 |
| | | | <-- | |
| EP 1524707 | A3 | 20060426 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR | | | | |
| JP 2005123094 | A | 20050512 | JP 2003-358401 | 20031017 |
| | | | <-- | |
| CN 1610473 | A | 20050427 | CN 2004-10080504 | 20040930 |
| | | | <-- | |
| US 20050084713 | A1 | 20050421 | US 2004-966708 | 20041015 |
| | | | <-- | |
| KR 2005037400 | A | 20050421 | KR 2004-83343 | 20041018 |
| | | | <-- | |

KR 858106 B1 20080910 JP 2003-358401 A 20031017
 PRIORITY APPLN. INFO.: <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

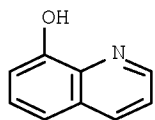
ED Entered STN: 22 Apr 2005

AB Organic electroluminescent devices are described which comprise a substrate, an anode layer; an organic structure including at least one light-emissive layer; a low resistance electron-transporting layer including a mixed layer of an electron-donating metal dopant and an organic compound; an organometallic complex-containing layer including an organometallic complex compound containing at least one metal ion selected from an alkaline metal ion, an alkaline earth metal ion and a rare earth metal ion; a reducing reaction generating layer; and a cathode layer, in that order. At least one of the anode layer and the cathode layer is transparent. The reducing reaction generating layer is a layer produced by depositing on the organometallic complex-containing layer a thermally reducible metal capable of reducing the metal ion in the organometallic complex compound in a vacuum to the corresponding metal, followed by causing an oxidation-reduction reaction between them.

IT 25387-93-3
 (organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

RN 25387-93-3 HCAPLUS

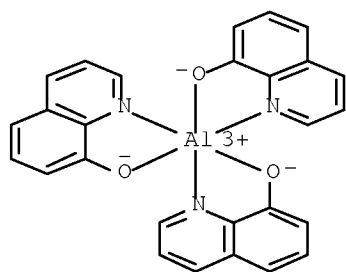
CN 8-Quinolinol, lithium salt (1:1) (CA INDEX NAME)



IT 2085-33-8, Aluminum tris(8-hydroxyquinolinato)
 (organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



IT 7429-90-5, Aluminum, uses
 (thermally reducible metal; organic electroluminescent devices
 employing organometallic complex-containing layer adjacent to
 reducing metal and fabrication process of electroluminescent
 devices)

RN 7429-90-5 HCAPLUS

CN Aluminum (CA INDEX NAME)

Al

IC ICM H01L051-20

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
 Properties)
 Section cross-reference(s): 76

IT Organometallic compounds
 (alkaline earth compds.; organic electroluminescent devices employing
 organometallic complex-containing layer adjacent to reducing
 metal and fabrication process of electroluminescent devices)

IT Organometallic compounds
 (alkali metal compds.; organic electroluminescent devices employing
 organometallic complex-containing layer adjacent to reducing
 metal and fabrication process of electroluminescent devices)

IT Sputtering
 (cathode deposition by; organic electroluminescent devices employing
 organometallic complex-containing layer adjacent to reducing
 metal and fabrication process of electroluminescent devices)

IT Vapor deposition process
 (electron-beam, thermally reducible metal deposition by; organic
 electroluminescent devices employing organometallic complex-containing
 layer adjacent to reducing metal and fabrication process of
 electroluminescent devices)

IT Vapor deposition process
 (laser ablation, thermally reducible metal deposition by; organic
 electroluminescent devices employing organometallic complex-containing
 layer adjacent to reducing metal and fabrication process of
 electroluminescent devices)

IT Electroluminescent devices
 Semiconductor device fabrication
 (organic electroluminescent devices employing organometallic
 complex-containing layer adjacent to reducing metal and
 fabrication process of electroluminescent devices)

IT Coordination compounds
 Organometallic compounds
 (organic electroluminescent devices employing organometallic
 complex-containing layer adjacent to reducing metal and
 fabrication process of electroluminescent devices)

IT Alkali metals, uses
 Alkaline earth metals
 Rare earth metals, uses
 (organic electroluminescent devices employing organometallic
 complex-containing layer adjacent to reducing metal resulting
 in formation of)

IT Alkali metal compounds
 Alkaline earth compounds
 Rare earth compounds
 (organometallic compds.; organic electroluminescent devices employing

- organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- IT Organometallic compounds
(rare earth compds.; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- IT Vapor deposition process
(resistive heating; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- IT Reduction
(thermal; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- IT 50926-11-9, Indium tin oxide
(electrode; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- IT 123847-85-8, α -NPD
(hole-transporting layer; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- IT 25387-93-3
(organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- IT 2085-33-8, Aluminum tris(8-hydroxyquinolino) 4733-39-5, Bathocuproine 7440-46-2, Cesium, uses
(organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- IT 7439-93-2P, Lithium, uses
(organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- IT 7429-90-5, Aluminum, uses
(thermally reducible metal; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- IT 7440-21-3, Silicon, uses 7440-32-6, Titanium, uses 7440-33-7, Tungsten, uses 7440-67-7, Zirconium, uses
(thermally reducible metal; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L68 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2005:345978 HCAPLUS Full-text

DOCUMENT NUMBER: 142:381970

TITLE: Organic electroluminescent devices employing a mixed hole injection layer of a metal oxide and an organic compound formed by co-deposition

INVENTOR(S): Kido, Junji; Matsumoto, Toshio; Nakada, Takeshi;
 Kawamura, Norifumi
 PATENT ASSIGNEE(S): International Manufacturing and Engineering
 Services Co., Ltd., Japan; Mitsubishi Heavy
 Industries, Ltd.
 SOURCE: Eur. Pat. Appl., 50 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|---|------------|
| EP 1524706 | A2 | 20050420 | EP 2004-24610 | 20041015 |
| | | | <-- | |
| EP 1524706 | A3 | 20060510 | | |
| | | | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR | |
| JP 2005123095 | A | 20050512 | JP 2003-358402 | 20031017 |
| | | | <-- | |
| CN 1610470 | A | 20050427 | CN 2004-10080503 | 20040930 |
| | | | <-- | |
| CN 100466331 | C | 20090304 | | |
| KR 2005037390 | A | 20050421 | KR 2004-82844 | 20041015 |
| | | | <-- | |
| KR 894306 | B1 | 20090424 | | |
| US 20050084712 | A1 | 20050421 | US 2004-966251 | 20041015 |
| | | | <-- | |
| JP 2010034594 | A | 20100212 | JP 2009-258054 | 20091111 |
| | | | <-- | |
| PRIORITY APPLN. INFO.: | | | JP 2003-358402 | A 20031017 |
| | | | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 142:381970

ED Entered STN: 22 Apr 2005

AB An organic electroluminescent device includes an anode electrode layer; a cathode electrode layer opposed to the anode electrode layer; a hole injection layer provided adjacent to the anode electrode layer an organic structure including at least one light-emissive layer or at least one light-emissive unit having at least one light-emissive layer; between the anode electrode layer and the cathode electrode layer; where at least one of the anode electrode layer and the cathode electrode layer is transparent; and the hole injection layer includes a mixed layer of a metal oxide and an organic compound formed by co-deposition.

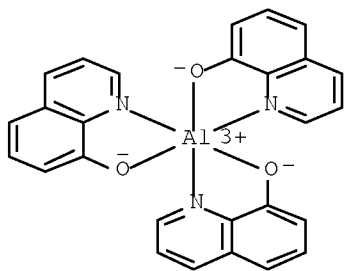
IT 2085-33-8, Aluminum tris(8-hydroxyquinolinato)

7429-90-5, Aluminum, uses 25387-93-3

(organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)

RN 2085-33-8 HCAPLUS

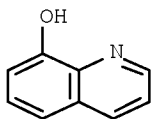
CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



RN 7429-90-5 HCAPLUS
 CN Aluminum (CA INDEX NAME)

Al

RN 25387-93-3 HCAPLUS
 CN 8-Quinolinol, lithium salt (1:1) (CA INDEX NAME)



● Li

IC ICM H01L051-20
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 76
 ST org electroluminescent device mixed hole injection oxide org layer
 IT Sputtering
 (anode deposition by; organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)
 IT Amines, uses
 (aromatic; organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)
 IT Vapor deposition process
 (electron-beam, oxide deposition using; organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)
 IT Vapor deposition process
 (laser ablation, oxide deposition using; organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)

IT Electroluminescent devices
 (organic electroluminescent devices employing mixed hole injection
 layer of metal oxide and organic compound formed by
 co-deposition)

IT Oxides (inorganic), uses
 Porphyrins
 (organic electroluminescent devices employing mixed hole injection
 layer of metal oxide and organic compound formed by
 co-deposition)

IT Vapor deposition process
 (resistive heating; organic electroluminescent devices employing mixed
 hole injection layer of metal oxide and organic compound
 formed by co-deposition)

IT 574-93-6D, Phthalocyanine, derivs. 2085-33-8, Aluminum
 tris(8-hydroxyquinolinato) 4733-39-5, Bathocuproine
 7429-90-5, Aluminum, uses 7440-46-2, Cesium, uses
 25387-93-3 50926-11-9, Indium tin oxide
 (organic electroluminescent devices employing mixed hole injection
 layer of metal oxide and organic compound formed by
 co-deposition)

IT 1314-62-1, Vanadium pentoxide, properties 1314-68-7, Rhenium oxide
 (Re2O7) 123847-85-8, α -NPD 185690-41-9, 2-TNATA
 189363-47-1 404001-42-9
 (organic electroluminescent devices employing mixed hole injection
 layer of metal oxide and organic compound formed by
 co-deposition)

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS
 RECORD (13 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L68 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2004:508931 HCAPLUS Full-text
 DOCUMENT NUMBER: 141:57069
 TITLE: Method of fabrication of large-area solar
 photovoltaic devices
 INVENTOR(S): Duggal, Anil Raj; Yakimov, Aharon
 PATENT ASSIGNEE(S): General Electric Company, USA
 SOURCE: U.S. Pat. Appl. Publ., 13 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| US 20040118444 | A1 | 20040624 | US 2002-248140 | 20021220 |
| | | | <-- | |
| PRIORITY APPLN. INFO.: | | | US 2002-248140 | 20021220 |
| | | | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

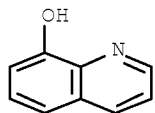
ED Entered STN: 24 Jun 2004

AB An organic photovoltaic (PV) device comprises a plurality of organic PV cells
 connected in series to cover a large area. The organic PV device optionally
 has an elec. circuit element connected in parallel to each organic PV cell.
 The organic PV device allows for continued operation even when short circuits
 develop or elec. interruption occurs in one of the cells. The device is

10/594,762

conveniently manufactured using a shadow mask, which allows for the formation of several consecutive layers in one apparatus

IT 148-24-3D, 8-Hydroxyquinoline, metal complex
 7429-90-5, Aluminum, uses 7440-66-6, Zinc, uses
 150477-54-6, Indium tin zinc oxide
 (method of fabrication of large-area solar photovoltaic devices)
 RN 148-24-3 HCAPLUS
 CN 8-Quinolinol (CA INDEX NAME)



RN 7429-90-5 HCAPLUS
 CN Aluminum (CA INDEX NAME)

Al

RN 7440-66-6 HCAPLUS
 CN Zinc (CA INDEX NAME)

Zn

RN 150477-54-6 HCAPLUS
 CN Indium tin zinc oxide (CA INDEX NAME)

| Component | Ratio | Component Registry Number |
|-----------|-------|------------------------------|
| O | x | 17778-80-2 |
| In | x | 7440-74-6 |
| Zn | x | 7440-66-6 |
| Sn | x | 7440-31-5 |

IC ICM H01L031-00
 INCL 136244000; 136263000; 438080000; 438082000
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 Section cross-reference(s): 76
 IT Vapor deposition process
 (chemical; method of fabrication of large-area solar photovoltaic
 devices)
 IT Cyanine dyes
 Diodes
 Electrodeposition
 Electron beam evaporation
 Electron transport

Hole transport

Resistors

Semiconductor materials

Solar cells

Sputtering

Varistors

(method of fabrication of large-area solar photovoltaic devices)

IT Vapor deposition process

(phys.; method of fabrication of large-area solar photovoltaic devices)

IT Coating process

(vacuum; method of fabrication of large-area solar photovoltaic devices)

IT 81-33-4 86-74-8D, Carbazole, derivs. 91-19-0D, Quinoxaline, derivs. 91-22-5D, Quinoline, derivs. 110-86-1D, Pyridine, derivs. 120-12-7D, Anthracene, derivs. ~~148-24-3D~~, 8-Hydroxyquinoline, metal complex 198-55-0D, Perylene, derivs. 288-32-4D, Imidazole, derivs. 289-95-2D, Pyrimidine, derivs. 494-72-4D, Diphenoquinone, derivs. 519-73-3, Triphenylmethane 578-95-0, Acridone 588-59-0D, Stilbene, derivs. 603-34-9, Triphenylamine 1327-33-9, Antimony oxide 1332-29-2, Tin oxide ~~7429-90-5~~, Aluminum, uses 7439-91-0, Lanthanum, uses 7439-93-2, Lithium, uses 7439-95-4, Magnesium, uses 7440-02-0, Nickel, uses 7440-06-4, Platinum, uses 7440-09-7, Potassium, uses 7440-19-9, Samarium, uses 7440-22-4, Silver, uses 7440-23-5, Sodium, uses 7440-24-6, Strontium, uses 7440-31-5, Tin, uses 7440-39-3, Barium, uses 7440-45-1, Cerium, uses 7440-48-4, Cobalt, uses 7440-53-1, Europium, uses 7440-57-5, Gold, uses ~~7440-66-6~~, Zinc, uses 7440-67-7, Zirconium, uses 7440-70-2, Calcium, uses 7440-74-6, Indium, uses 9033-83-4, Polyphenylene 11120-54-0D, Oxadiazole, derivs. 12654-97-6, Triazine 25233-30-1, Polyaniline 25233-34-5, Polythiophene 30604-81-0, Polypyrrole 36118-45-3, Pyrazoline 37306-44-8D, Triazole, derivs. 50926-11-9, Ito 66280-99-7, Poly(thienylene vinylene) 91201-85-3, Polyisothianaphthene 96638-49-2, Poly(phenylene vinylene) 96638-49-2D, Polyphenylene vinylene, CN- and CF₃-substituted 99685-96-8, Buckminsterfullerene ~~150477-54-6~~, Indium tin zinc oxide (method of fabrication of large-area solar photovoltaic devices)

L68 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2003:1007243 HCAPLUS Full-text

DOCUMENT NUMBER: 140:51531

TITLE: Method for the roll-to-roll deposition of an optically transparent and high conductivity metallic thin film

INVENTOR(S): He, Xiao-Ming; Heydarpour, Ramin

PATENT ASSIGNEE(S): Avery Dennison Corporation, USA

SOURCE: PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| WO 2003107079 | A2 | 20031224 | WO 2003-US18755 | 20030612 |
| | | | <-- | |
| WO 2003107079 | A9 | 20040304 | | |

WO 2003107079 A3 20040701

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
 NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ,
 TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
 NE, SN, TD, TG

US 20040001915 A1 20040101 US 2002-172282 20020614
 <--

US 6811815 B2 20041102
 AU 2003259035 A1 20031231 AU 2003-259035 20030612
 <--

EP 1534510 A2 20050601 EP 2003-760348 20030612
 <--

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

PRIORITY APPLN. INFO.: US 2002-172282 A 20020614
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 WO 2003-US18755 W 20030612
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ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 26 Dec 2003

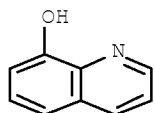
AB The invention relates to a method for the roll-to-roll deposition of an optically transparent and high conductivity metallic thin film, allowing the film to be collected in a continuous roll. The method consists of the steps of (i) providing a flexible plastic substrate; (ii) depositing a multilayered conductive metallic film on the flexible plastic substrate by a thin film deposition technique to form a composite film; and (iii) collecting the composite film in continuous rolls.

IT 148-24-3D, 8-Hydroxyquinoline, metal complexes
 2085-33-8D, Alq3, derivs.

(luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

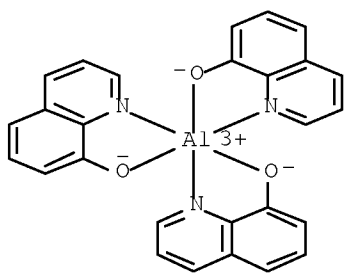
RN 148-24-3 HCAPLUS

CN 8-Quinolinol (CA INDEX NAME)



RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



- IC ICM G02F
- CC 76-2 (Electric Phenomena)
Section cross-reference(s): 38, 56, 57, 73, 78
- ST roll deposition optically transparent conductive metallic thin film
- IT Ketones, uses
(1,3-diketones, metal complexes, luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Polyesters, uses
(Arylite, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Polyesters, uses
(ST 504, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Polyesters, uses
(aromatic, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Vapor deposition process
(chemical; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Schiff bases
(complexes, luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Rolls
(composite film collected on; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Metals, uses
(conductive films; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Polyolefins
(cycloalkene polymer-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Films
(elec. conductive; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Electric conductors
(films; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Coating process
(flexible substrate reinforced by; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

- IT Glass substrates
 - (flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Epoxy resins, uses
 - Fluoropolymers, uses
 - Phenolic resins, uses
 - Polycarbonates, uses
 - Polyimides, uses
 - Polyolefins
 - Polysulfones, uses
 - Polyurethanes, uses
 - (flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Vapor deposition process
 - (ion plating; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Polyacetylenes, uses
 - (ladder, luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Charge transfer complexes
 - Organometallic compounds
 - Poly(arylenealkenylenes)
 - Polyanilines
 - Polyphenyls
 - Rare earth complexes
 - (luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Composites
 - Laser ablation
 - Luminescent substances
 - Magnetron sputtering
 - (method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Polyalkenamers
 - (method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Ladder polymers
 - (polyacetylenes, luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Polyethers, uses
 - (polyamide-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Polyethers, uses
 - (polyester-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Polyamides, uses
 - Polyesters, uses
 - Polysulfones, uses
 - (polyether-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Cycloalkenes
 - (polymers, polyolefin-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)
- IT Polyethers, uses

(polysulfone-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Gold alloy, nonbase
Silver alloy, nonbase
(method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT 24968-11-4, Polyethylene naphthalate
(Kaladex S 1020/500, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT 25038-59-9, ST 504, uses
(ST 504, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT 7440-21-3, Silicon, uses 9002-84-0, Polytetrafluoroethylene
9004-35-7, Cellulose acetate 9011-14-7, Polymethylmethacrylate
24937-79-9, Polyvinylidene fluoride 25014-41-9, Polyacrylonitrile
25230-87-9 25667-42-9, Polyethersulfone 150872-17-6, Arton
637005-62-0, Arton G 7810
(flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT 91-22-5D, Quinoline, metal complexes 123-54-6D, Acetylacetone, metal complexes
~~148-24-3D~~, 8-Hydroxyquinoline, metal complexes
~~2085-33-8D~~, Alq3, derivs. 7440-31-5D, Tin, tin(IV) complexes
9033-83-4, Poly(phenylene) 17056-99-4D, 5-Hydroxyquinoxaline, metal complexes
25038-69-1, Poly(phenylacetylene) 25067-59-8, Poly(N-vinylcarbazole)
25233-30-1, Poly(aniline) 25233-34-5, Poly(thiophene)
25233-34-5D, Poly(thiophene), 3-alkyl derivs. 26009-24-5, Poly(p-phenylenevinylene)
26009-24-5D, Poly(p-phenylenevinylene), dialkoxy derivs. 41999-83-1D, Maleonitriledithiol, metal complexes
95270-88-5, Poly(fluorene) 104934-51-2, Poly(3-octylthiophene)
(luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT 7440-22-4, Silver, uses 7440-57-5, Gold, uses 25038-78-2, Dicyclopentadiene homopolymer
174351-38-3, Cerium indium oxide 246032-84-8, Copper 0.5, gold 1, silver 98.5 (atomic)
(method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT 7440-37-1, Argon, processes 7727-37-9, Nitrogen, processes
7782-44-7, Oxygen, processes
(sputtering process gas; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L68 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2003:898222 HCAPLUS Full-text
 DOCUMENT NUMBER: 140:278163
 TITLE: Organic electroluminescent material and its application
 INVENTOR(S): Qiu, Yong; Qiao, Juan
 PATENT ASSIGNEE(S): Qinghua University, Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 26 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| CN 1388205 | A | 20030101 | CN 2002-121289 | 20020613 |
| | | | <-- | |
| CN 1250674 | C | 20060412 | | |
| US 20040001970 | A1 | 20040101 | US 2003-352493 | 20030128 |
| | | | <-- | |
| US 7232616 | B2 | 20070619 | | |
| JP 2004162002 | A | 20040610 | JP 2003-168569 | 20030613 |
| | | | <-- | |
| JP 3689815 | B2 | 20050831 | | |
| PRIORITY APPLN. INFO.: | | | CN 2002-121289 | A 20020613 |
| | | | <-- | |
| | | | CN 2002-145923 | A 20021023 |
| | | | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 140:278163

ED Entered STN: 18 Nov 2003

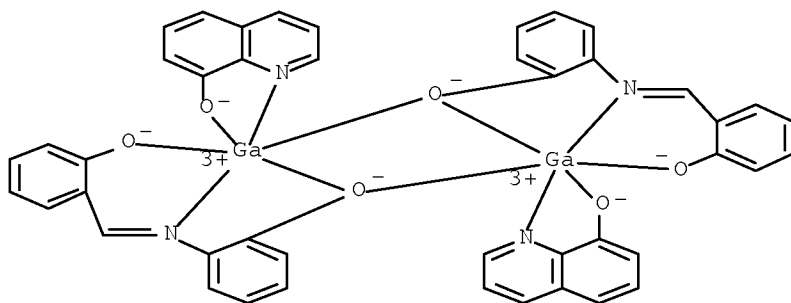
AB The organic electroluminescent material is a Schiff base containing tridentate complex, (L2L3M)_n (L2 = bidentate ligand; L3 = schiff base-type tridentate ligand; M = metal ion such as Al, Ga, or In; and n = 1 or 2). The L3 is HOXCH:NYOH (X and/or Y = Ph, naphthyl, phenanthryl, pyridyl, thiazolyl, carbazolyl, or their derivs. substituted by alkyl, alkoxy, NO₂, CN, NH₂, halo, aromatic group, thienyl, pyrrolyl, or pyridyl). The L2 is HOZN [Z = 8-hydroxyquinoline, 4-hydroxy-1,5-naphthyridine, 5-hydroxyquinoxaline, 2-(2-hydroxyphenyl)benzoxazole, 2-(2-hydroxyphenyl)benzimidazole, 2-(2-hydroxyphenyl)benzothiazole, 10-hydroxybenzo[h]quinoline, pyridine-2-carboxylic acid, or their derivs. substituted by alkyl, alkoxy, NO₂, CN, NH₂, halo, aromatic group, thienyl, pyrrolyl, or pyridyl]. The organic electroluminescent material is prepared by condensing salicylaldehyde or derivative with 2-aminophenol or its derivative to obtain Schiff base, complexing with M³⁺ salt and another ligand, and purifying via sublimation. The organic electroluminescent material may be used as electron transmission layer or luminescent layer of organic electroluminescent device with multilayer or monolayer structure, doped dye, or dye, preferably used in preparing red organic electroluminescent device. The electroluminescent devices were manufactured on ITO-modified glass sheet by vacuum vapor deposition.

IT 502844-08-8P

(crystal structure of; organic electroluminescent material for electroluminescent device)

RN 502844-08-8 HCAPLUS

CN Gallium, bis[μ-[2-[[[2-(hydroxy-κO:κO)phenyl]imino-κN]methyl]phenolato(2-)-κO]]bis(8-quinolinolato-κN1,κO8)di-, stereoisomer (9CI) (CA INDEX NAME)

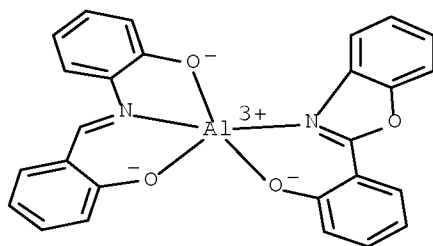


IT 326850-13-9P 656823-73-3P 656823-77-7P
 656823-83-5P 656823-85-7P 656823-86-8P
 656823-94-8P 656824-04-3P 656824-10-1P
 656824-12-3P 674768-96-8P 674768-98-0P
 674769-00-7P 674769-01-8P 674769-03-0P

(organic electroluminescent material for electroluminescent device)

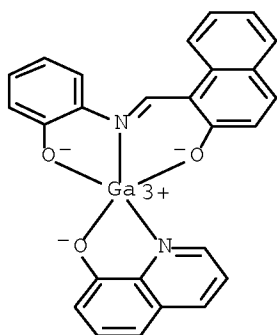
RN 326850-13-9 HCAPLUS

CN Aluminum, [2-(2-benzoxazolyl-κN3)phenolato-κO][2-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]phenolato(2-)-κO]-(9CI) (CA INDEX NAME)



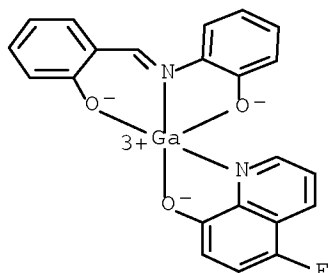
RN 656823-73-3 HCAPLUS

CN Gallium, [1-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]-2-naphthalenolato(2-)-κO](8-quinolinolato-κN1,κO8)-(CA INDEX NAME)



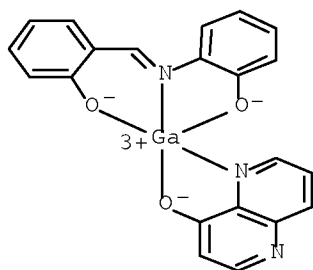
RN 656823-77-7 HCAPLUS

CN Gallium, (5-fluoro-8-quinolinolato- κ N1, κ O8) [2-[[[2-(hydroxy- κ O)phenyl]imino- κ N]methyl]phenolato(2-)- κ O]-(9CI) (CA INDEX NAME)



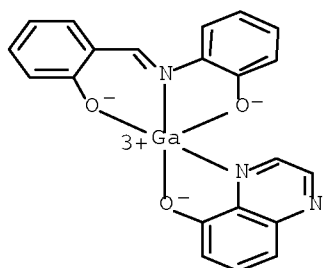
RN 656823-83-5 HCAPLUS

CN Gallium, [2-[[[2-(hydroxy- κ O)phenyl]imino- κ N]methyl]phenolato(2-)- κ O] (1,5-naphthyridin-4-olato- κ N5, κ O4)- (9CI) (CA INDEX NAME)



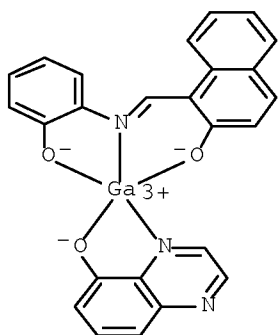
RN 656823-85-7 HCAPLUS

CN Gallium, [2-[[[2-(hydroxy- κ O)phenyl]imino- κ N]methyl]phenolato(2-)- κ O] (5-quinoxalinolato- κ N4, κ O5)- (9CI) (CA INDEX NAME)



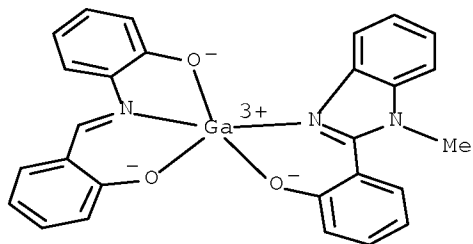
RN 656823-86-8 HCAPLUS

CN Gallium, [1-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]-2-naphthalenolato(2-)-κO](5-quinoxalinolato-κN4,κO5)-(CA INDEX NAME)



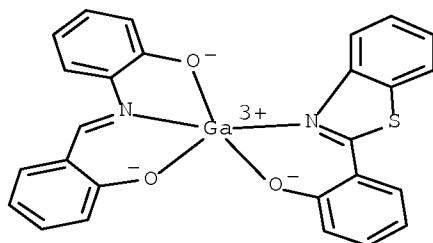
RN 656823-94-8 HCAPLUS

CN Gallium, [2-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]phenolato(2-)-κO][2-(1-methyl-1H-benzimidazol-2-yl-κN3)phenolato-κO]-(9CI) (CA INDEX NAME)



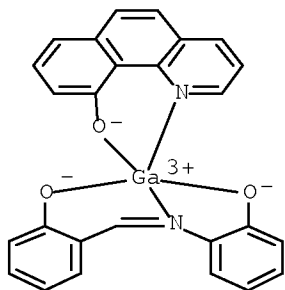
RN 656824-04-3 HCAPLUS

CN Gallium, [2-(2-benzothiazolyl-κN3)phenolato-κO][2-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]phenolato(2-)-κO]-(9CI) (CA INDEX NAME)



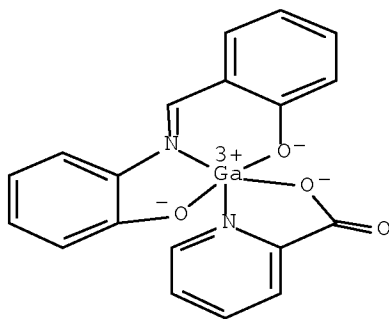
RN 656824-10-1 HCAPLUS

CN Gallium, (benzo[h]quinolin-10-olato- κ N1, κ O10) [2-[[[2-(hydroxy- κ O)phenyl]imino- κ N]methyl]phenolato(2-)- κ O]-(9CI) (CA INDEX NAME)



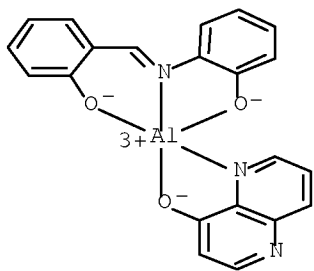
RN 656824-12-3 HCAPLUS

CN Gallium, [2-[[[2-(hydroxy- κ O)phenyl]imino- κ N]methyl]phenolato(2-)- κ O] (2-pyridinecarboxylato- κ N1, κ O2)- (9CI) (CA INDEX NAME)



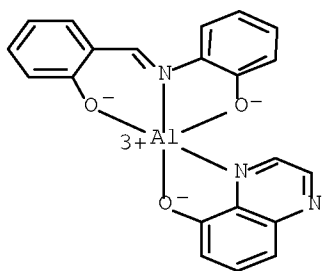
RN 674768-96-8 HCAPLUS

CN Aluminum, [2-[[[2-(hydroxy- κ O)phenyl]imino- κ N]methyl]phenolato(2-)- κ O] (1,5-naphthyridin-4-olato- κ N5, κ O4)- (9CI) (CA INDEX NAME)



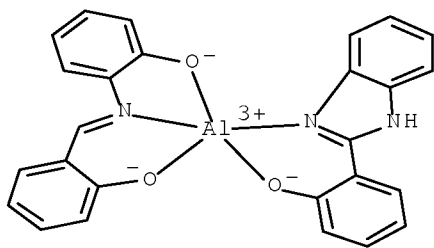
RN 674768-98-0 HCAPLUS

CN Aluminum, [2-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]phenolato(2-)-κO] (5-quinoxalinolato-κN4,κO5)- (9CI) (CA INDEX NAME)



RN 674769-00-7 HCAPLUS

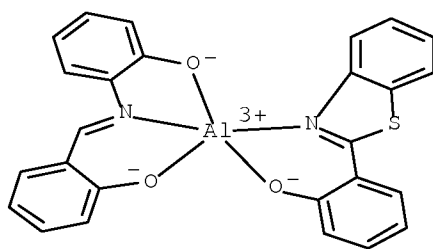
CN Aluminum, [2-(1H-benzimidazol-2-yl-κN3)phenolato-κO] [2-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]phenolato(2-)-κO]- (9CI) (CA INDEX NAME)



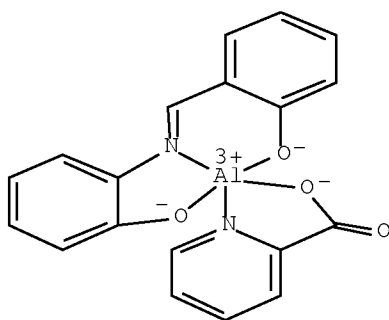
RN 674769-01-8 HCAPLUS

CN Aluminum, [2-(2-benzothiazolyl-κN3)phenolato-κO] [2-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]phenolato(2-)-κO]- (9CI) (CA INDEX NAME)

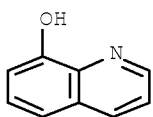
10/594,762



RN 674769-03-0 HCAPLUS
 CN Aluminum, [2-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]phenolato(2-)-κO](2-pyridinecarboxylato-κN1,κO2)- (9CI) (CA INDEX NAME)



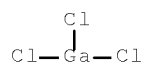
IT 148-24-3, 8-Hydroxyquinoline, reactions 7446-70-0
 , Aluminum chloride, reactions 13450-90-3, Gallium trichloride
 (preparation of organic electroluminescent material)
 RN 148-24-3 HCAPLUS
 CN 8-Quinololinol (CA INDEX NAME)



RN 7446-70-0 HCAPLUS
 CN Aluminum chloride (AlCl3) (CA INDEX NAME)



RN 13450-90-3 HCAPLUS
 CN Gallium chloride (GaCl3) (CA INDEX NAME)



IC ICM C09K011-06
 CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 74, 75
 IT 502844-08-8P
 (crystal structure of; organic electroluminescent material for electroluminescent device)
 IT 326850-13-9P 656823-73-3P 656823-77-7P
 656823-83-5P 656823-85-7P 656823-86-8P
 656823-94-8P 656824-04-3P 656824-10-1P
 656824-12-3P 674768-95-7P 674768-96-8P
 674768-97-9P 674768-98-0P 674768-99-1P
 674769-00-7P 674769-01-8P 674769-02-9P
 674769-03-0P
 (organic electroluminescent material for electroluminescent device)
 IT 90-02-8, Salicylaldehyde, reactions 95-55-6, 2-Aminophenol
 98-98-6, Pyridine-2-carboxylic acid 148-24-3,
 8-Hydroxyquinoline, reactions 387-97-3, 5-Fluoro-8-hydroxyquinoline
 708-06-5, 2-Hydroxy-1-naphthaldehyde 835-64-3,
 2-(2-Hydroxyphenyl)benzoxazole 2963-66-8,
 2-(2-Hydroxyphenyl)benzimidazole 3411-95-8,
 2-(2-Hydroxyphenyl)benzothiazole 5423-54-1,
 4-Hydroxy-1,5-naphthyridine 7446-70-0, Aluminum chloride,
 reactions 10025-82-8, Indium chloride 13450-90-3,
 Gallium trichloride 17056-99-4, 5-Hydroxyquinoxaline 33155-90-7,
 10-Hydroxybenzo[h]quinoline
 (preparation of organic electroluminescent material)
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS
 RECORD (1 CITINGS)

L68 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2003:433000 HCAPLUS Full-text
 DOCUMENT NUMBER: 139:14916
 TITLE: Electrophotographic photoreceptors with
 charge-stopping layers containing metal
 complexes and their manufacture
 INVENTOR(S): Fukumoto, Koichi; Aragae, Ryuichi; Ono, Masayuki
 PATENT ASSIGNEE(S): Matsushita Electric Industrial Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| JP 2003162079 | A | 20030606 | JP 2001-358780 | 20011126 |

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PRIORITY APPLN. INFO.:

JP 2001-358780

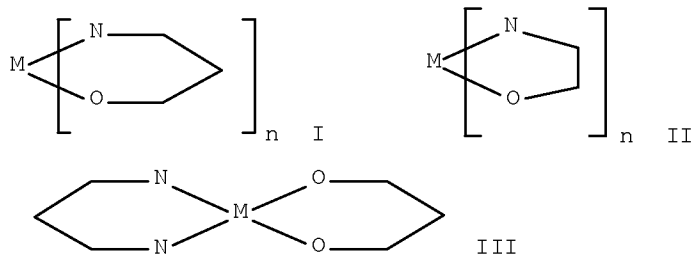
20011126

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OTHER SOURCE(S): MARPAT 139:14916

ED Entered STN: 06 Jun 2003

GI



AB The photoreceptor comprises a conductive support, a charge-stopping layer containing metal complex I, II, or III (M = metal ion; n = 0, 1, 2, 3), a charge-generating layer, and a charge-transfer layer. Specific compounds suitable as ligand for the complexes are also given. Manufacture of the photoreceptor includes vacuum vapor deposition of the complex. Clear electrophotog. images free of fogging are obtained even after repeated use.

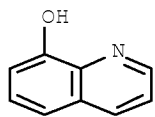
IT 148-24-3DP, 8-Hydroxyquinoline, metal complexes

58280-31-2P 116083-83-1P 164259-44-3P

(electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition)

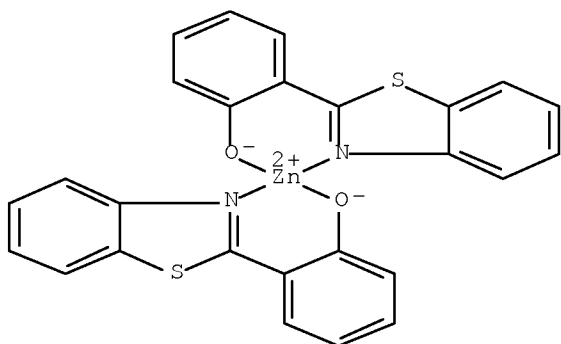
RN 148-24-3 HCAPLUS

CN 8-Quinolinol (CA INDEX NAME)



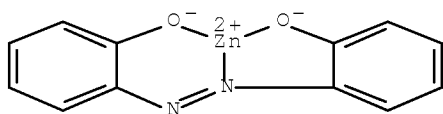
RN 58280-31-2 HCAPLUS

CN Zinc, bis[2-(2-benzothiazolyl-κN3)phenolato-κO]-, (T-4)-
(CA INDEX NAME)



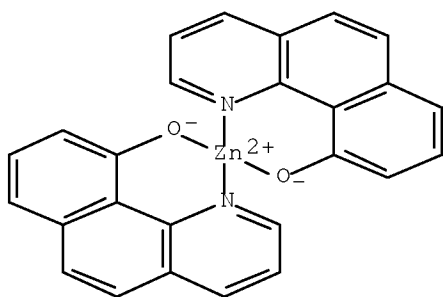
RN 116083-83-1 HCAPLUS

CN Zinc, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)]- (9CI) (CA INDEX NAME)



RN 164259-44-3 HCAPLUS

CN Zinc, bis(benzo[h]quinolin-10-olato-κN1,κO10)-, (T-4)- (CA INDEX NAME)



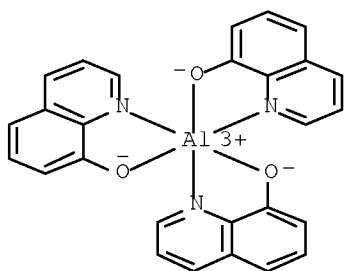
IT 2085-33-8, Tris(8-quinolinolato)aluminum

23467-27-8 41584-66-1 78970-14-6

(electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition)

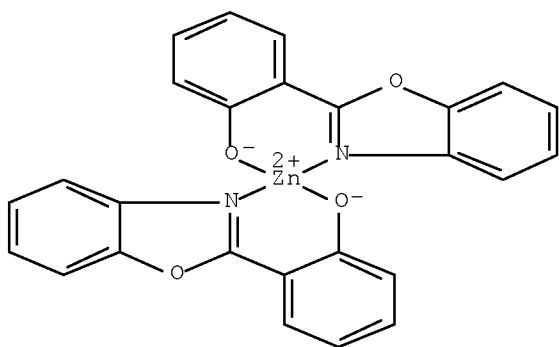
RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



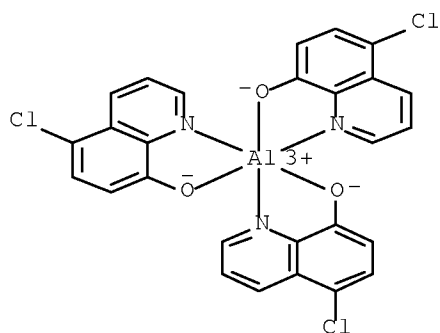
RN 23467-27-8 HCAPLUS

CN Zinc, bis[2-(2-benzoxazolyl-κN3)phenolato-κO]-, (T-4)-
(CA INDEX NAME)



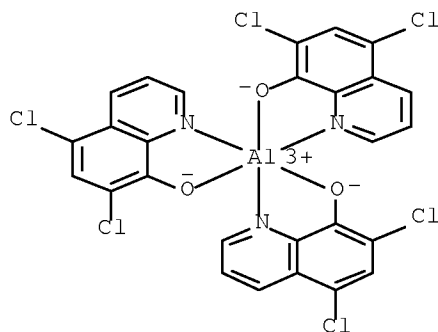
RN 41584-66-1 HCAPLUS

CN Aluminum, tris(5-chloro-8-quinolinolato-κN1,κO8)- (CA
INDEX NAME)



RN 78970-14-6 HCAPLUS

CN Aluminum, tris(5,7-dichloro-8-quinolinolato-κN1,κO8)- (CA
INDEX NAME)



- IC ICM G03G005-14
ICS G03G005-00; G03G005-06
- CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST electrophotog photoreceptor charge stopping layer metal complex
- IT Electrophotographic photoconductors (photoreceptors)
(electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition)
- IT Chelates
(electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition)
- IT Vapor deposition process
(vacuum; electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition)
- IT 66-71-7DP, 1,10-Phenanthroline, metal complexes 148-24-3DP
, 8-Hydroxyquinoline, metal complexes 835-64-3DP, metal complexes
2050-14-8DP, metal complexes 3411-95-8DP, metal complexes
17904-83-5P, Tris(dibenzoylmethanato)(1,10-phenanthroline)europium
18130-95-5P, Tris(benzoylacetonato)(1,10-phenanthroline)europium
33155-90-7DP, 10-Hydroxybenzo[h]quinoline, metal complexes
33421-36-2DP, metal complexes 58280-31-2P
116083-83-1P 164259-44-3P
(electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition)
- IT 2085-33-8, Tris(8-quinolinolato)aluminum
23467-27-8 41584-66-1 78970-14-6
(electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition)

L68 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2001:644372 HCAPLUS Full-text

DOCUMENT NUMBER: 135:378318

TITLE: Organic electroluminescent device fabricated with
chemical vapor deposited
bis(8-hydroxy-5-quinolyl)-methane aluminum chelate
polymer film

AUTHOR(S): Yu, J.; Chen, Z.; Miyata, S.

CORPORATE SOURCE: Tokyo University of Agriculture and Technology,
Graduate School of Bio-Applications and Systems
Engineering (BASE), Tokyo, Koganei, 184-0012,
Japan

SOURCE: Synthetic Metals (2001), 123(2), 239-243
CODEN: SYMEDZ; ISSN: 0379-6779

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal

LANGUAGE: English

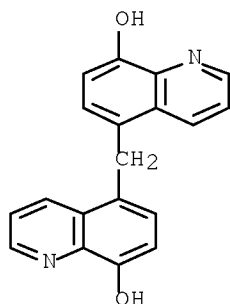
ED Entered STN: 04 Sep 2001

AB In this paper CVD method is presented for the preparation of chelate polymer film as constituent for organic electroluminescent (EL) devices. The chelate polymer film, poly(bis(8-hydroxy-5-quinolyl)methane Al), was thermally converted into by simultaneously coevapd. Al acetylacetonate and bis(8-hydroxy-5-quinolyl)-methane in the gas phase in the CVD process. Two kinds of EL devices using the chelate polymer as the emitting material were fabricated, and their EL properties were characterized and discussed.

IT 2536-71-2 13963-57-0, Aluminum acetylacetonate
(organic electroluminescent device fabricated with chemical
vapor deposited bis(8-hydroxy-5-quinolyl)-methane
aluminum chelate polymer film)

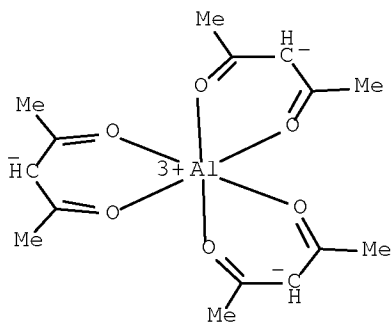
RN 2536-71-2 HCAPLUS

CN 8-Quinolinol, 5,5'-methylenebis- (CA INDEX NAME)



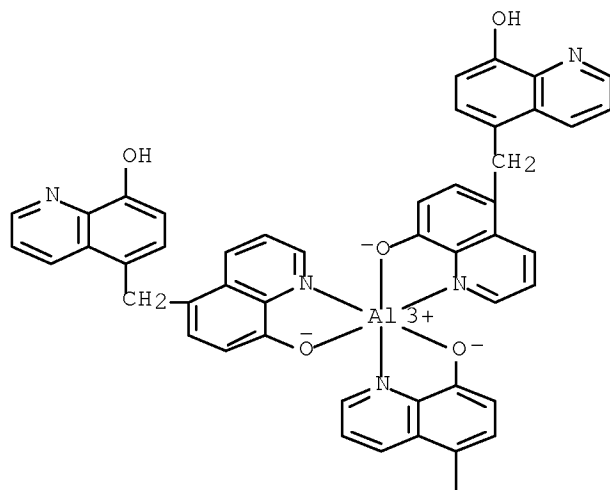
RN 13963-57-0 HCAPLUS

CN Aluminum, tris(2,4-pentanedionato- κ O₂, κ O₄)-, (OC-6-11)-
(CA INDEX NAME)

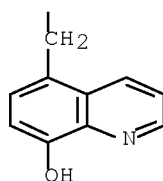


IT 374067-48-8
 (polymeric; organic electroluminescent device fabricated with
 chemical vapor deposited
 bis(8-hydroxy-5-quinolyl)-methane aluminum chelate polymer
 film)
 RN 374067-48-8 HCAPLUS
 CN Aluminum, tris[5-[(8-hydroxy-5-quinolinyl)methyl]-8-quinolinolato-
 κ N1, κ O8]- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
 Properties)
 IT Vapor deposition process
 (chemical; organic electroluminescent device fabricated with chem
 . vapor deposited
 bis(8-hydroxy-5-quinolyl)-methane aluminum chelate polymer
 film)
 IT Electroluminescent devices
 IR spectra
 Luminescence
 (organic electroluminescent device fabricated with chemical
 vapor deposited bis(8-hydroxy-5-quinolyl)-methane

aluminum chelate polymer film)

IT 25067-59-8, PVK
(organic electroluminescent device fabricated with chemical
vapor deposited bis(8-hydroxy-5-quinolyl)-methane
aluminum chelate polymer film)

IT 2536-71-2 13963-57-0, Aluminum acetylacetonate
(organic electroluminescent device fabricated with chemical
vapor deposited bis(8-hydroxy-5-quinolyl)-methane
aluminum chelate polymer film)

IT 374067-48-8
(polymeric; organic electroluminescent device fabricated with
chemical vapor deposited
bis(8-hydroxy-5-quinolyl)-methane aluminum chelate polymer
film)

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS
RECORD (5 CITINGS)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L68 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2001:582229 HCAPLUS Full-text

DOCUMENT NUMBER: 135:160002

TITLE: Organic electroluminescent device and its
manufacturing method

INVENTOR(S): Sato, Yoshiharu; Tanamura, Mitsuru

PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan

SOURCE: PCT Int. Appl., 46 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|------------|
| WO 2001058222 | A1 | 20010809 | WO 2001-JP719 | 20010201 |
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| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| JP 2001332390 | A | 20011130 | JP 2001-18792 | 20010126 |
| <-- | | | | |
| JP 3972584 | B2 | 20070905 | | |
| EP 1173049 | A1 | 20020116 | EP 2001-902728 | 20010201 |
| <-- | | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| US 20020037429 | A1 | 20020328 | US 2001-968500 | 20011002 |
| <-- | | | | |
| US 6534202 | B2 | 20030318 | | |
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| <-- | | | | |
| | | | JP 2000-76620 | A 20000317 |

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 WO 2001-JP719 W 20010201
 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 10 Aug 2001

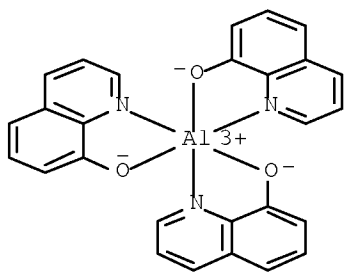
AB An organic electroluminescent device comprises a luminescence layer interposed between a pos. electrode and a neg. electrode on a substrate. The neg. electrode comprises metal material, alkaline metal, and C and O atoms. The neg. electrode is formed by vapor phase deposition using a metal material and an organic compound containing an alkaline metal. The organic electroluminescent device is heat-resistant and weather-resistant, and it operates on low voltage and emits high-luminance light while maintaining stable luminescence characteristics. The organic electroluminescent element has a wide range of manufacturing process conditions.

IT 2085-33-8, Al 8q 37220-89-6D, Aluminum lithium
oxide, carbon doped 157077-25-3

(organic electroluminescent device)

RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



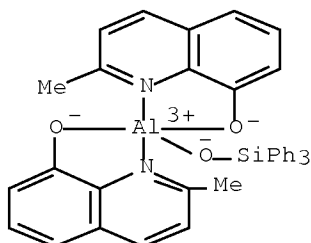
RN 37220-89-6 HCAPLUS

CN Aluminum lithium oxide (CA INDEX NAME)

| Component | Ratio | Component Registry Number |
|-----------|-------|------------------------------|
| O | x | 17778-80-2 |
| Li | x | 7439-93-2 |
| Al | x | 7429-90-5 |

RN 157077-25-3 HCAPLUS

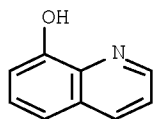
CN Aluminum, bis(2-methyl-8-quinolinolato-
κN1,κO8)(triphenylsilanolato)- (CA INDEX NAME)



IT 7429-90-5, Aluminum, uses 25387-93-3
 (organic electroluminescent device)
 RN 7429-90-5 HCAPLUS
 CN Aluminum (CA INDEX NAME)

Al

RN 25387-93-3 HCAPLUS
 CN 8-Quinolinol, lithium salt (1:1) (CA INDEX NAME)



● Li

IC H05B033-26; H05B033-10; H05B033-14
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 Section cross-reference(s): 74
 IT Vapor deposition process
 (manufacture of organic electroluminescent device)
 IT 147-14-8, Copper phthalocyanine 2085-33-8, Al 8q
 37220-89-6D, Aluminum lithium oxide, carbon doped
 50926-11-9, ITO 58328-31-7 94928-86-6 123847-85-8,
 4,4'-Bis[N-[1-naphthyl]-N-phenylamino]biphenyl 157077-25-3
 (organic electroluminescent device)
 IT 1313-59-3, Sodium oxide, uses 7429-90-5, Aluminum, uses
 12057-24-8, Lithium oxide, uses 25387-93-3 26134-62-3,
 Lithium nitride 160883-74-9 352521-14-3
 (organic electroluminescent device)
 OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS
 RECORD (7 CITINGS)
 REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE
 RE FORMAT

L68 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 2001:185142 HCAPLUS Full-text
 DOCUMENT NUMBER: 134:246046
 TITLE: Efficient electron-injection for organic
 electroluminescent devices
 INVENTOR(S): Madathil, Joseph K.; Mason, Max Garrett; Tang,
 Ching Wan
 PATENT ASSIGNEE(S): Eastman Kodak Company, USA
 SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|--|------------|
| EP 1083612 | A2 | 20010314 | EP 2000-202921 | 20000821 |
| | | | <-- | |
| EP 1083612 | A3 | 20040102 | | |
| | | | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, | |
| | | | PT, IE, SI, LT, LV, FI, RO | |
| US 6278236 | B1 | 20010821 | US 1999-387402 | 19990902 |
| | | | <-- | |
| JP 2001085165 | A | 20010330 | JP 2000-267679 | 20000904 |
| | | | <-- | |
| PRIORITY APPLN. INFO.: | | | US 1999-387402 | A 19990902 |
| | | | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 16 Mar 2001

AB An organic electroluminescent (EL) device having a layered structure, including an anode; an organic hole-transport layer in contact with the anode; an organic emitting layer having 1 surface thereof in contact with the hole-transport layer; an organic electron-transport layer in contact with a second surface of the emitting layer; an electron-injecting layer in contact with the electron-transport layer; and a cathode in contact with the electron-injecting layer, in which the electron-injecting layer includes Al and ≥ 1 alkali halide or ≥ 1 alkaline earth halide.

IT 7429-90-5, Aluminum, processes
(electron-injection layer; efficient electron-injection layers for organic electroluminescent devices)

RN 7429-90-5 HCAPLUS

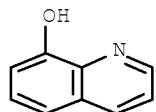
CN Aluminum (CA INDEX NAME)

Al

IT 148-24-3, 8-Quinolinol, processes
(emitting layer; efficient electron-injection layers for organic electroluminescent devices)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (CA INDEX NAME)



IT 37275-76-6, Aluminum Zinc oxide 117944-65-7,
Indium Zinc oxide
(light transmissive anode; efficient electron-injection

layers for organic electroluminescent devices)

RN 37275-76-6 HCAPLUS

CN Aluminum zinc oxide (CA INDEX NAME)

| Component | Ratio | Component Registry Number |
|-----------|-------|------------------------------|
| ===== | ===== | ===== |
| O | x | 17778-80-2 |
| Zn | x | 7440-66-6 |
| Al | x | 7429-90-5 |

RN 117944-65-7 HCAPLUS

CN Indium zinc oxide (CA INDEX NAME)

| Component | Ratio | Component Registry Number |
|-----------|-------|------------------------------|
| ===== | ===== | ===== |
| O | x | 17778-80-2 |
| In | x | 7440-74-6 |
| Zn | x | 7440-66-6 |

IC ICM H01L051-20

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 74, 75

IT Electron transport

Electron-hole recombination

Hole transport

(efficient electron-injection layers for organic electroluminescent devices)

IT Transparent films

(elec. conductive, anode; efficient electron-injection layers for organic electroluminescent devices)

IT Alkali metal fluorides

Alkaline earth fluorides

(electron-injection layer; efficient electron-injection layers for organic electroluminescent devices)

IT Conduction electrons

(electron-injection; efficient electron-injection layers for organic electroluminescent devices)

IT Electric conductors

(films, transparent, anode; efficient electron-injection layers for organic electroluminescent devices)

IT Electroluminescent devices

(organic; efficient electron-injection layers for organic electroluminescent devices)

IT Glass, uses

Plastics, uses

(substrate; efficient electron-injection layers for organic electroluminescent devices)

IT Vapor deposition process

(vacuum; efficient electron-injection layers for organic electroluminescent devices)

IT 7429-90-5, Aluminum, processes

(electron-injection layer; efficient electron-injection layers for organic electroluminescent devices)

IT 7681-49-4, Sodium fluoride, processes 7783-40-6, Magnesium fluoride

7783-48-4, Strontium fluoride 7787-32-8, Barium fluoride

7789-23-3, Potassium fluoride 7789-24-4, Lithium fluoride, processes

7789-75-5, Calcium fluoride, processes 13400-13-0, Cesium fluoride

13446-74-7, Rubidium fluoride

(electron-injection layers; efficient electron-injection layers for organic electroluminescent devices)

IT 148-24-3, 8-Quinolinol, processes
(emitting layer; efficient electron-injection layers for organic electroluminescent devices)

IT 1332-29-2, Tin oxide 12640-79-8, Nickel tungsten oxide
37275-76-6, Aluminum Zinc oxide 50926-11-9, Indium-tin-oxide
56997-34-3, Cadmium tin oxide 117944-65-7, Indium Zinc
oxide 158346-28-2, Indium Magnesium oxide
(light transmissive anode; efficient electron-injection layers for organic electroluminescent devices)

IT 14808-60-7, Quartz, uses
(substrate; efficient electron-injection layers for organic electroluminescent devices)

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS
RECORD (6 CITINGS)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN THE
RE FORMAT

L68 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2001:162141 HCAPLUS Full-text

DOCUMENT NUMBER: 134:185709

TITLE: Organic electroluminescent materials

INVENTOR(S): Qiu, Yong; Shao, Yan

PATENT ASSIGNEE(S): Qinghua Univ., Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 18
pp.
CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

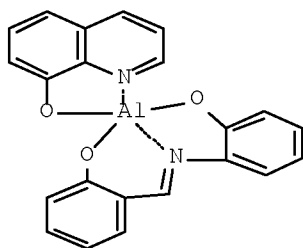
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| ----- | ---- | ----- | ----- | ----- |
| CN 1258710 | A | 20000705 | CN 2000-100040 | 20000107 |
| | | | <-- | |
| CN 1139649 | C | 20040225 | | |
| US 20010037024 | A1 | 20011101 | US 2001-755688 | 20010105 |
| | | | <-- | |
| US 6410766 | B1 | 20020625 | | |
| PRIORITY APPLN. INFO.: | | | CN 2000-100040 | A 20000107 |
| | | | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 08 Mar 2001

GI



I

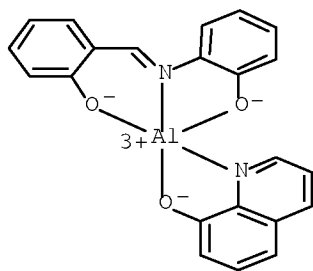
AB The electroluminescent materials compose of Al complexes having organic ligands such as 8-hydroxyquinoline and Schiff base from salicylaldehyde and o-aminophenol, i.e., I, and/or their fused naphtho derivs. and analogs. The electroluminescent material is synthesized by condensing salicylaldehyde with o-aminophenol or derivs., recrystg. in organic solvent to obtain Schiff base as ligand, and complexing with Al compound and 8-hydroxyquinoline or 2-phenol in the presence of a base. The electroluminescent element containing I was manufactured by chemical vapor deposition and vacuum electroplating method and it showed superior brightness.

IT 303981-53-5P 326850-12-8P 326850-13-9P
 326850-14-0P 326850-15-1P 326850-16-2P
 326850-17-3P 326850-18-4P 326850-19-5P
 326850-20-8P 326850-21-9P

(preparation of quinolinolatoaluminum complexes as organic electroluminescent materials)

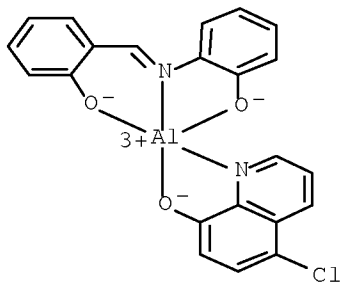
RN 303981-53-5 HCAPLUS

CN Aluminum, [2-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]phenolato(2-)-κO](8-quinolinolato-κN1,κO8)- (9CI) (CA INDEX NAME)



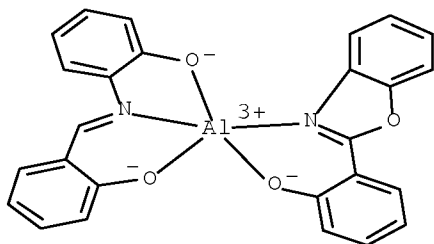
RN 326850-12-8 HCAPLUS

CN Aluminum, (5-chloro-8-quinolinolato-κN1,κO8) [2-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]phenolato(2-)-κO]- (9CI) (CA INDEX NAME)



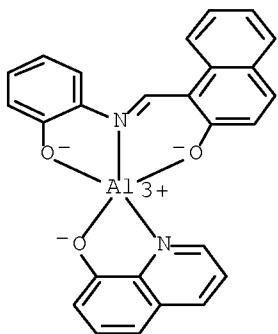
RN 326850-13-9 HCAPLUS

CN Aluminum, [2-(2-benzoxazolyl-κN3)phenolato-κO][2-[[2-(hydroxy-κO)phenyl]imino-κN]methylphenolato(2-)-κO]-(9CI) (CA INDEX NAME)



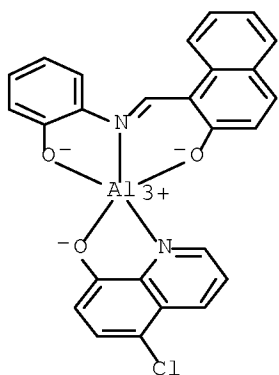
RN 326850-14-0 HCAPLUS

CN Aluminum, [1-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]-2-naphthalenolato(2-)-κO](8-quinolinolato-κN1, κO8)-(CA INDEX NAME)



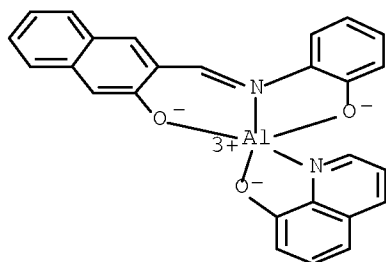
RN 326850-15-1 HCAPLUS

CN Aluminum, (5-chloro-8-quinolinolato-κN1, κO8)[1-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]-2-naphthalenolato(2-)-κO]-(CA INDEX NAME)



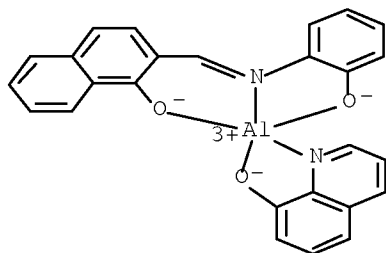
RN 326850-16-2 HCAPLUS

CN Aluminum, [3-[[[2-(hydroxy-κO)phenyl]imino-κN)methyl]-2-naphthalenolato(2-)-κO](8-quinolinolato-κN1,κO8)-(CA INDEX NAME)



RN 326850-17-3 HCAPLUS

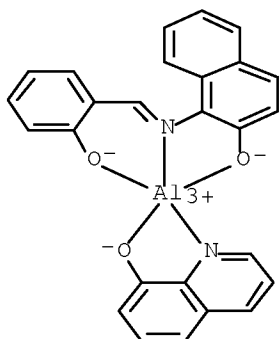
CN Aluminum, [2-[[[2-(hydroxy-κO)phenyl]imino-κN)methyl]-1-naphthalenolato(2-)-κO](8-quinolinolato-κN1,κO8)-(CA INDEX NAME)



RN 326850-18-4 HCAPLUS

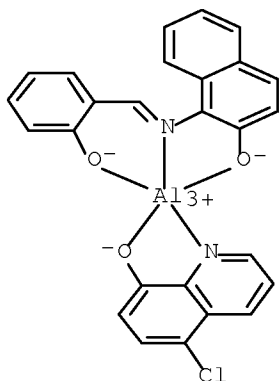
10/594,762

CN Aluminum, [1-[[[2-(hydroxy-κO)phenyl]methylene]amino-κN]-2-naphthalenolato(2-)-κO](8-quinolinolato-κN1,κO8)-(CA INDEX NAME)



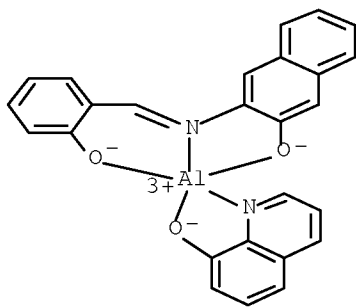
RN 326850-19-5 HCAPLUS

CN Aluminum, (5-chloro-8-quinolinolato-κN1,κO8)[1-[[[2-(hydroxy-κO)phenyl]methylene]amino-κN]-2-naphthalenolato(2-)-κO]- (CA INDEX NAME)



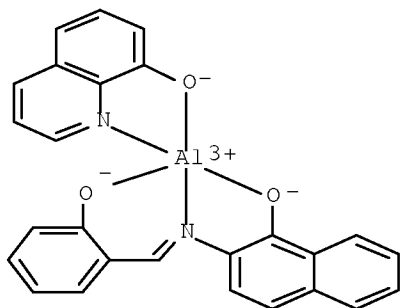
RN 326850-20-8 HCAPLUS

CN Aluminum, [3-[[[2-(hydroxy-κO)phenyl]methylene]amino-κN]-2-naphthalenolato(2-)-κO](8-quinolinolato-κN1,κO8)-(CA INDEX NAME)



RN 326850-21-9 HCAPLUS

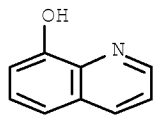
CN Aluminum, [2-[[[2-(hydroxy-κO)phenyl]methylene]amino-κN]-1-naphthalenolato(2-)-κO](8-quinolinolato-κN1,κO8)-(CA INDEX NAME)



IT 148-24-3, 8-Hydroxyquinoline, reactions 555-31-7
 , Triisopropoxyaluminum 7446-70-0, Aluminum chloride,
 reactions
 (preparation of quinolinolatoaluminum complexes as organic
 electroluminescent materials)

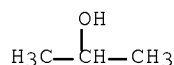
RN 148-24-3 HCAPLUS

CN 8-Quinolinol (CA INDEX NAME)



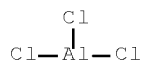
RN 555-31-7 HCAPLUS

CN 2-Propanol, aluminum salt (3:1) (CA INDEX NAME)



● 1/3 Al

RN 7446-70-0 HCAPLUS
CN Aluminum chloride (AlCl₃) (CA INDEX NAME)



IC C09K011-06
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
IT Vapor deposition process
(chemical; preparation of quinolinolatoaluminum complexes as organic electroluminescent materials)
IT Electroluminescent devices
(thin-film; preparation of quinolinolatoaluminum complexes as organic electroluminescent materials)
IT 303981-53-5P 326850-12-8P 326850-13-9P
326850-14-0P 326850-15-1P 326850-16-2P
326850-17-3P 326850-18-4P 326850-19-5P
326850-20-8P 326850-21-9P
(preparation of quinolinolatoaluminum complexes as organic electroluminescent materials)
IT 90-02-8, Salicylaldehyde, reactions 95-55-6, 2-Aminophenol
130-16-5, 5-Chloro-8-hydroxyquinoline 148-24-3,
8-Hydroxyquinoline, reactions 555-31-7,
Triisopropoxyaluminum 581-71-5,
3-Hydroxy-2-naphthalenecarboxaldehyde 708-06-5,
2-Hydroxy-1-naphthalenecarboxaldehyde 835-64-3 2834-92-6,
1-Amino-2-naphthol 7446-70-0, Aluminum chloride, reactions
(preparation of quinolinolatoaluminum complexes as organic electroluminescent materials)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L68 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2000:222672 HCAPLUS Full-text
DOCUMENT NUMBER: 133:12007
TITLE: Preparation and characterization of some alumosiloxanes as single-source MOCVD precursors for aluminosilicate coatings
AUTHOR(S): Zemskova, S. M.; Haynes, J. A.; Besmann, T. M.; Hunt, R. D.; Beach, D. B.; Golovlev, V. N.
CORPORATE SOURCE: Oak Ridge National Laboratory, Oak Ridge, TN, 37831-6063, USA
SOURCE: Journal de Physique IV: Proceedings (2000), 10(Pr2, Chemical Vapour Deposition), Pr2/35-Pr2/42

PUBLISHER: EDP Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 07 Apr 2000

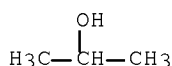
AB Alumosiloxanes $[\text{Al}(\text{OSiMe}_3)_3]_2$, $(\text{Me}_3\text{SiO})_2\text{Al}[\text{OSi}(\text{OBu-t})_3]$, $[(\text{acac})\text{Al}(\text{OSiMe}_3)_2]_2$, $(\text{Ox})\text{Al}[\text{OSi}(\text{OBu-t})_3]_2$, ($\text{Me} = \text{CH}_3$; $\text{Bu-t} = \text{t-Bu}$; $\text{acac} = \text{C}_5\text{H}_7\text{O}_2$; $\text{Ox} = \text{C}_9\text{H}_6\text{NO}$) were synthesized and their thermal properties were studied by TGA in Ar at 25–500°. $[\text{Al}(\text{OSiMe}_3)_3]_2$ and $[(\text{acac})\text{Al}(\text{OSiMe}_3)_2]_2$ showed substantial volatility during heating regardless of their dimeric structures in the solid state, while the other compds. were largely decomposed under the same conditions. Therefore, $[\text{Al}(\text{OSiMe}_3)_3]_2$ and $[(\text{acac})\text{Al}(\text{OSiMe}_3)_2]_2$ were chosen as prospective precursors for the MOCVD of aluminosilicate coatings. Study of these compds. by laser mass-spectrometry (laser excitation at 355 nm) showed that the decomposition pathway proceeds through the formation of a number of heavy species originating from dimeric $[\text{>Al<}(\text{OSi})_2\text{>Al<}]$ fragments of $[\text{Al}(\text{OSiMe}_3)_3]_2$ and $[(\text{acac})\text{Al}(\text{OSiMe}_3)_2]_2$ mols. and Si-containing light species of m/z 52 (C_2Si) and 55 ($\text{C}_2\text{H}_3\text{Si}$) originating from OSiMe_3 ligands. Initial expts. were carried out on the deposition of aluminosilicate coatings on Si carbide from the precursors described.

IT ~~555-31-7~~, Aluminum triisopropoxide

(for preparation of alumosiloxanes)

RN 555-31-7 HCAPLUS

CN 2-Propanol, aluminum salt (3:1) (CA INDEX NAME)

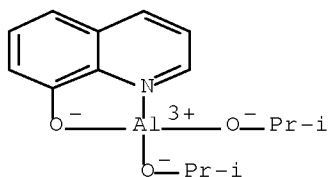


● 1/3 Al

IT 15710-92-6P

(preparation and reaction with tri(*t*-butyl)siloxane)

RN 15710-92-6 HCAPLUS

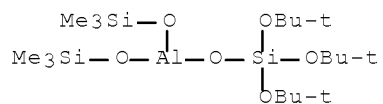
CN Aluminum, bis(2-propanolato)(8-quinolinolato- $\kappa\text{N}1, \kappa\text{O}8$)-, (T-4)- (CA INDEX NAME)

IT 270903-75-8P 270903-76-9P

(preparation and thermal decomposition as potential solvent assisted MOCVD precursor for aluminosilicate coatings)

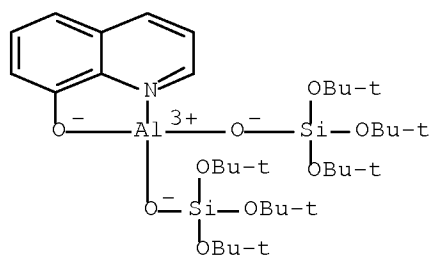
RN 270903-75-8 HCAPLUS

CN Aluminum, bis(trimethylsilanolato)[tris(1,1-dimethylethyl) orthosilicato- $\kappa\text{O}'''$]- (9CI) (CA INDEX NAME)



RN 270903-76-9 HCAPLUS

CN Aluminum, (8-quinolinolato- $\kappa\text{N}1, \kappa\text{O}8$)bis[tris(1,1-dimethylethyl) orthosilicato- $\kappa\text{O}'''$]-, (T-4)- (9CI) (CA INDEX NAME)

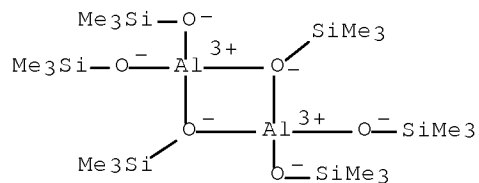


IT 20009-02-3P 92784-84-4P

(preparation, laser mass spectra and thermal decomposition as potential single-source MOCVD precursor for aluminosilicate coatings)

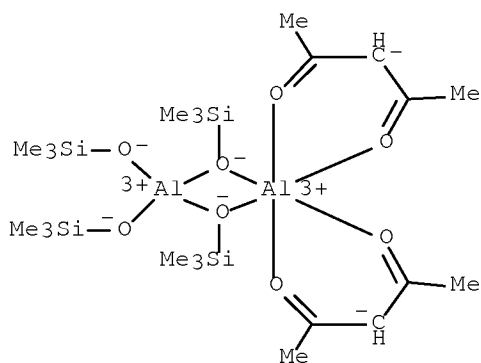
RN 20009-02-3 HCAPLUS

CN Aluminum, bis[μ -(trimethylsilanolato)]tetrakis(trimethylsilanolato) di- (8CI, 9CI) (CA INDEX NAME)

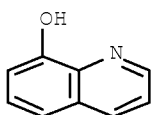


RN 92784-84-4 HCAPLUS

CN Aluminum, bis(2,4-pentanedionato- $\kappa\text{O}, \kappa\text{O}'$)bis[μ -(trimethylsilanolato)]bis(trimethylsilanolato)di- (9CI) (CA INDEX NAME)



IT 148-24-3, 8-Hydroxyquinoline, reactions
 (reaction with aluminum triisopropoxide)
 RN 148-24-3 HCAPLUS
 CN 8-Quinolinol (CA INDEX NAME)



CC 78-7 (Inorganic Chemicals and Reactions)
 IT Mass spectra
 (laser; of alumosiloxanes as potential MOCVD precursors for aluminosilicate coatings)
 IT Vapor deposition process
 (metalorg.; preparation and characterization of alumosiloxanes as potential MOCVD precursors for aluminosilicate coatings)
 IT Thermal decomposition
 (of alumosiloxanes as potential MOCVD precursors for aluminosilicate coatings)
 IT 107-46-0, Hexamethyldisiloxane 123-54-6, Acetylacetone, reactions
 555-31-7, Aluminum triisopropoxide 2754-27-0, Trimethylacetoxysilane 5356-87-6, Tri(tert-butoxy)silane
 (for preparation of alumosiloxanes)
 IT 15710-92-6P
 (preparation and reaction with tri(t-butyl)siloxane)
 IT 270903-75-8P 270903-76-9P
 (preparation and thermal decomposition as potential solvent assisted MOCVD precursor for aluminosilicate coatings)
 IT 20009-02-3P 92784-84-4P
 (preparation, laser mass spectra and thermal decomposition as potential single-source MOCVD precursor for aluminosilicate coatings)
 IT 148-24-3, 8-Hydroxyquinoline, reactions
 (reaction with aluminum triisopropoxide)
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
 REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L68 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
 ACCESSION NUMBER: 1995:547736 HCAPLUS Full-text
 DOCUMENT NUMBER: 123:69921
 ORIGINAL REFERENCE NO.: 123:12237a,12240a
 TITLE: Manufacture of organic electroluminescent device
 INVENTOR(S): Sato, Yoshiharu; Kanai, Hiroyuki
 PATENT ASSIGNEE(S): Mitsubishi Kagaku KK, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| ----- | --- | ----- | ----- | ----- |
| JP 07062526 | A | 19950307 | JP 1993-205375 | 19930819 |
| | | | <-- | |
| PRIORITY APPLN. INFO.: | | | JP 1993-205375 | 19930819 |
| | | | <-- | |

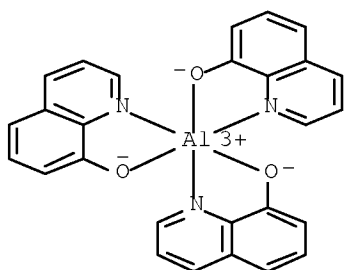
ED Entered STN: 13 May 1995

AB The device is manufactured by forming the organic light-emitting layer on a substrate at 60-150°. The layer may contain a metal complex of 8-hydroxyquinoline, which may be formed by vacuum vapor deposition. The device shows good heat resistance and emission stability for long periods.

IT 2085-33-8, Tris(8-hydroxyquinolinato)aluminum
 7069-05-8 13978-85-3,
 Bis(8-hydroxyquinolinato)zinc 14642-34-3,
 Tris(8-hydroxyquinolinato)gallium
 (manufacture of electroluminescent device containing hydroxyquinoline metal complex)

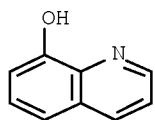
RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-κN1,κO8)- (CA INDEX NAME)



RN 7069-05-8 HCAPLUS

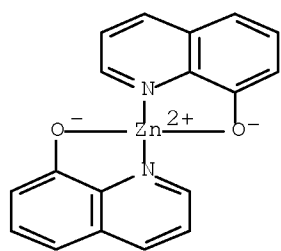
CN 8-Quinolinol, calcium salt (2:1) (CA INDEX NAME)



● 1/2 Ca

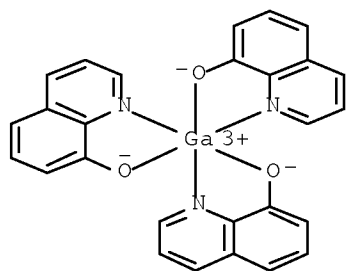
RN 13978-85-3 HCAPLUS

CN Zinc, bis(8-quinolinolato- κ N1, κ O8)-, (T-4)- (CA INDEX NAME)



RN 14642-34-3 HCAPLUS

CN Gallium, tris(8-quinolinolato- κ N1, κ O8)- (9CI) (CA INDEX NAME)



IC ICM C23C014-24

ICS C09K011-06; H05B033-10; H05B033-14

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

ST electroluminescent device hydroxyquinoline metal complex; deposition vacuum vapor electroluminescent film

IT Electroluminescent devices

Vapor deposition processes

(manufacture of electroluminescent device containing hydroxyquinoline metal complex)

IT 2085-33-8, Tris(8-hydroxyquinolinato)aluminum

7069-05-8 13978-85-3,

10/594,762

Bis(8-hydroxyquinolinato)zinc 14514-42-2,
Tris(8-hydroxyquinolinato)indium 14642-34-3,
Tris(8-hydroxyquinolinato)gallium 15276-55-8 15956-38-4,
Tris(8-hydroxyquinolinato)scandium 16009-78-2,
Tris(8-hydroxyquinolinato)yttrium 67952-28-7,
Bis(8-hydroxyquinolinato)magnesium

(manufacture of electroluminescent device containing hydroxyquinoline metal complex)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS
RECORD (1 CITINGS)

L68 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1992:85311 HCAPLUS Full-text

DOCUMENT NUMBER: 116:85311

ORIGINAL REFERENCE NO.: 116:14527a,14530a

TITLE: Forming highly anticorrosive thin films

INVENTOR(S): Minowa, Emiko; Kobayashi, Shiro; Ito, Masahiko;
Izumitani, Masakiyo

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| JP 03111553 | A | 19910513 | JP 1989-247947 | 19890926 |
| | | | <-- | |
| JP 06021343 | B | 19940323 | | |
| PRIORITY APPLN. INFO.: | | | JP 1989-247947 | 19890926 |
| | | | <-- | |

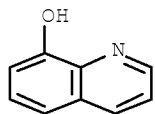
ED Entered STN: 06 Mar 1992

AB The title process involves covering a substrate with a metal and an organic compound forming a compound insol. with the metal by elec. discharge in vacuo. Making magnetic disks, magnetic heads, optomagnetic disks, and electrolytic condensers is also claimed. A polyethylene substrate was treated with Co-Ni and dimethylglyoxime by magnetron sputter process at $1 + 10^{-3}$ Pa vacuum.

IT 148-24-3, 8-Hydroxyquinoline, uses
(sputter coating with metals and, for highly
anticorrosive thin film formation)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (CA INDEX NAME)



IT 7429-90-5, Aluminum, uses
(sputter coating with organic compds. and, for highly
anticorrosive thin film formation)

RN 7429-90-5 HCAPLUS

CN Aluminum (CA INDEX NAME)

A1

IC ICM C23C014-06
ICS C23C014-12; G11B005-85; G11B007-26; H01G009-05

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 42

ST sputter coating metal org compd; anticorrosive thin
film sputter coating; magnetic disk sputter
coating; head magnetic sputter coating; optomagnetic
disk sputter coating; elec condenser sputter coating
; cobalt nickel sputter coating; dimethylglyoxime sputter
coating; polyethylene sputter coating

IT Sputtering
(coating by, of metal and organic compds.)

IT Electric capacitors
(manufacture of, sputter coating in)

IT Recording apparatus
(magnetic heads, manufacture of, sputter coating in)

IT Memory devices
(magnetic, disks, manufacture of, sputter coating in)

IT Optical imaging devices
(magneto-, disks, manufacture of, sputter coating in)

IT Recording apparatus
(optical disks, manufacture of, sputter coating in)

IT 9002-88-4P, Polyethylene
(formation of highly anticorrosive metal-organic compound thin
films on, by sputter coating)

IT 66-71-7, o-Phenanthroline 72-48-0D, Alizarin, derivs. 91-20-3,
Naphthalene, uses 91-20-3D, Naphthalene, derivs. 95-45-4,
Dimethylglyoxime 148-24-3, 8-Hydroxyquinoline, uses
366-18-7, 2,2'-Dipyridine 463-56-9D, Thiocyanic acid, organic derivs.
13408-62-3D, Ferricyanide, organic derivs. 13408-63-4D, Ferrocyanide,
organic derivs. 27598-85-2, Aminophenol
(sputter coating with metals and, for highly
anticorrosive thin film formation)

IT 7429-90-5, Aluminum, uses 7439-89-6, Iron, uses
7440-02-0, Nickel, uses 7440-25-7, Tantalum, uses 7440-27-9,
Terbium, uses 7440-48-4, Cobalt, uses 7440-67-7, Zirconium, uses
11101-13-6
(sputter coating with organic compds. and, for highly
anticorrosive thin film formation)

L68 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1984:59650 HCAPLUS Full-text

DOCUMENT NUMBER: 100:59650

ORIGINAL REFERENCE NO.: 100:8997a,9000a

TITLE: Metallic image production, and composite material
and treatment solutions for this process

INVENTOR(S): Sasa, Nobumasa

PATENT ASSIGNEE(S): Konishiroku Photo Industry Co., Ltd. , Japan

SOURCE: Ger. Offen., 50 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------|
| DE 3241980 | A1 | 19830526 | DE 1982-3241980 | 19821112 |
| | | | <-- | |
| JP 58083846 | A | 19830519 | JP 1981-181747 | 19811114 |
| | | | <-- | |
| JP 01045896 | B | 19891005 | | |
| JP 58083843 | A | 19830519 | JP 1981-181748 | 19811114 |
| | | | <-- | |
| JP 01045897 | B | 19891005 | | |
| JP 58083847 | A | 19830519 | JP 1981-181749 | 19811114 |
| | | | <-- | |
| US 4455364 | A | 19840619 | US 1982-439427 | 19821105 |
| | | | <-- | |
| GB 2113152 | A | 19830803 | GB 1982-32192 | 19821111 |
| | | | <-- | |
| GB 2113152 | B | 19860917 | | |
| GB 2156088 | A | 19851002 | GB 1984-28641 | 19841113 |
| | | | <-- | |
| GB 2156088 | B | 19861126 | | |
| GB 2155861 | A | 19851002 | GB 1984-28642 | 19841113 |
| | | | <-- | |
| PRIORITY APPLN. INFO.: | | | JP 1981-181747 | A 19811114 |
| | | | <-- | |
| | | | JP 1981-181748 | A 19811114 |
| | | | <-- | |
| | | | JP 1981-181749 | A 19811114 |
| | | | <-- | |
| | | | GB 1982-32192 | A3 19821111 |
| | | | <-- | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 100:59650

ED Entered STN: 12 May 1984

AB Metal images having outstanding edge sharpness in the etched segments are prepared from a composite material consisting of a support, a thin metal layer, a photosensitive resin layer, and ≥ 1 layer containing a metal chelating agent. The metal chelating agent may also be contained in a processing solution. Thus, a poly(ethylene terephthalate) support was coated with an 800 Å layer of Al by vapor deposition and then with a composition containing methacrylic acid-styrene copolymer 5, pentaerythritol triacrylate 5, 2-isopropylthioxanthone 1, diethylaminoisoamyl benzoate 0.5 g, and Me cellosolve 100 mL to give a photosensitive layer. The resultant material was then imagewise exposed to a halftone original and developed in a 25° solution containing NaOH 4, Na anthraquinone-2,6-disulfonate (I) 10 g, and water 1 L for 30 s to show no scum formation and an excellent image corresponding the original. A control which used a developer containing no I showed heavy scum formation.

IT 12252-30-1

(photoimaging composition containing layer of, for metal image production)

RN 12252-30-1 HCAPLUS

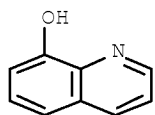
CN Aluminum, compd. with iron (2:1) (CA INDEX NAME)

| Component | Ratio | Component | Registry Number |
|-----------|-------|-----------|-----------------|
| Fe | 1 | | 7439-89-6 |
| Al | 2 | | 7429-90-5 |

IT 7429-90-5, uses and miscellaneous
 (photoimaging composition with layer of, for metal image
 production)
 RN 7429-90-5 HCAPLUS
 CN Aluminum (CA INDEX NAME)

Al

IT 148-24-3, uses and miscellaneous
 (photoimaging compns. containing, for metal image production)
 RN 148-24-3 HCAPLUS
 CN 8-Quinolinol (CA INDEX NAME)



IC G03F007-00
 CC 74-10 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 IT 64-02-8 100-51-6, uses and miscellaneous 853-68-9 1310-73-2,
 uses and miscellaneous 7664-38-2, uses and miscellaneous
 7705-08-0, uses and miscellaneous 61702-43-0
 (developer compns. containing, for metal layer-containing
 photoimaging composition)
 IT 853-67-8
 (developer compns. containing, for metal layer-containing
 photoimaging compns.)
 IT 7440-69-9, uses and miscellaneous 12252-30-1
 (photoimaging composition containing layer of, for metal image
 production)
 IT 7429-90-5, uses and miscellaneous
 (photoimaging composition with layer of, for metal image
 production)
 IT 56-40-6, uses and miscellaneous 56-41-7, uses and miscellaneous
 56-84-8, uses and miscellaneous 56-86-0, uses and miscellaneous
 59-31-4 60-00-4, uses and miscellaneous 66-71-7 72-48-0
 78-90-0 81-61-8 82-48-4 82-49-5 84-48-0 84-49-1 86-95-3
 87-69-4, uses and miscellaneous 90-02-8, uses and miscellaneous
 92-27-3 99-57-0 107-15-3, uses and miscellaneous 110-15-6, uses
 and miscellaneous 111-40-0 116-63-2 117-14-6 121-88-0
 123-54-6, uses and miscellaneous 130-22-3 139-13-9 141-82-2,
 uses and miscellaneous 142-73-4 144-62-7, uses and miscellaneous
 147-85-3, uses and miscellaneous 148-24-3, uses and
 miscellaneous 366-18-7 482-54-2 552-16-9 607-34-1 625-75-2
 1787-61-7 1939-36-2 2066-93-5 2150-60-9 2466-09-3 3618-58-4
 6975-60-6 10380-08-2 25149-61-5 66675-89-6 88544-95-0
 88651-71-2
 (photoimaging compns. containing, for metal image production)
 OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS

10/594,762

| | | |
|------------------|---|--|
| REFERENCE COUNT: | 3 | RECORD (4 CITINGS) THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT |
|------------------|---|--|

=> d his nofile

(FILE 'HOME' ENTERED AT 09:37:24 ON 05 MAR 2010)

FILE 'HCAPLUS' ENTERED AT 09:37:36 ON 05 MAR 2010

E BIS(HYDROXY-5-QUNOLYL)METHANE

L1 1 SEA SPE=ON ABB=ON PLU=ON US20070190247/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 09:38:12 ON 05 MAR 2010

L2 20 SEA SPE=ON ABB=ON PLU=ON (1333-74-0/BI OR 15318-08-8/BI
OR 19553-62-9/BI OR 20791-15-5/BI OR 310888-77-8/BI OR
310888-80-3/BI OR 310888-81-4/BI OR 310888-82-5/BI OR
310888-85-8/BI OR 310888-87-0/BI OR 7358-26-1/BI OR
7440-37-1/BI OR 7440-59-7/BI OR 75-24-1/BI OR 7727-37-9/BI
OR 870126-56-0/BI OR 870126-57-1/BI OR 870126-58-2/BI OR
870126-59-3/BI OR 97-93-8/BI)

FILE 'HCAPLUS' ENTERED AT 09:42:18 ON 05 MAR 2010

L3 0 SEA SPE=ON ABB=ON PLU=ON "BIS(HYDROXY-5-QUNOLYL)METHANE"

FILE 'REGISTRY' ENTERED AT 09:52:12 ON 05 MAR 2010

E C19H17N2O2/MF

L4 86 SEA SPE=ON ABB=ON PLU=ON C19H17N2O2/MF
L5 0 SEA SPE=ON ABB=ON PLU=ON L4 AND HYDROXYQUIN?
L6 20 SEA SPE=ON ABB=ON PLU=ON L4 AND QUIN?

E C19H14N2O2/MF

L7 1182 SEA SPE=ON ABB=ON PLU=ON C19H14N2O2/MF
L8 1 SEA SPE=ON ABB=ON PLU=ON L7 AND HYDROXYQUIN?
L9 24 SEA SPE=ON ABB=ON PLU=ON L7 AND 8-QUIN?
L10 11 SEA SPE=ON ABB=ON PLU=ON L9 AND QUINOLINOL?
L11 10 SEA SPE=ON ABB=ON PLU=ON L10 NOT 1H-INDOLE?

E 8-HYDROXYQUINOLINATE/CN

L12 1 SEA SPE=ON ABB=ON PLU=ON 8-HYDROXYQUINOLINATE/CN

E 8-HYDROXYQUINOLINOL/CN

E 8-HYDROXYQUINOLINE/CN

L13 1 SEA SPE=ON ABB=ON PLU=ON 8-HYDROXYQUINOLINE/CN

L14 685 SEA SPE=ON ABB=ON PLU=ON 148-24-3/CRN

L15 9 SEA SPE=ON ABB=ON PLU=ON 16582-16-4/CRN

L16 0 SEA SPE=ON ABB=ON PLU=ON 856949-35-4/CRN

L17 0 SEA SPE=ON ABB=ON PLU=ON 848290-21-1/CRN

L18 0 SEA SPE=ON ABB=ON PLU=ON 444149-04-6 /CRN

L19 0 SEA SPE=ON ABB=ON PLU=ON 128500-72-1/CRN

L20 0 SEA SPE=ON ABB=ON PLU=ON 97970-36-0 /CRN

L21 2 SEA SPE=ON ABB=ON PLU=ON 63969-39-1/CRN

L22 1 SEA SPE=ON ABB=ON PLU=ON 61924-02-5/CRN

L23 0 SEA SPE=ON ABB=ON PLU=ON 13292-19-8/CRN

L24 0 SEA SPE=ON ABB=ON PLU=ON 13222-06-5/CRN

L25 34 SEA SPE=ON ABB=ON PLU=ON 2536-71-2/CRN

L26 664194 SEA SPE=ON ABB=ON PLU=ON (AL OR GA OR ZN)/ELS

L27 122588 SEA SPE=ON ABB=ON PLU=ON L26 AND CCS/CI

L28 541606 SEA SPE=ON ABB=ON PLU=ON L26 NOT L27

L29 541606 SEA SPE=ON ABB=ON PLU=ON L28 OR L28

D 300000 RN

L30 300000 SEA RAN=(173475-42-8) SPE=ON ABB=ON PLU=ON L28 OR L28

L31 241606 SEA SPE=ON ABB=ON PLU=ON L29 NOT L30

10/594,762

FILE 'HCAPLUS' ENTERED AT 10:03:34 ON 05 MAR 2010

L32 30 SEA SPE=ON ABB=ON PLU=ON L12
 L33 10124 SEA SPE=ON ABB=ON PLU=ON L13
 L34 1839 SEA SPE=ON ABB=ON PLU=ON L14
 L35 3 SEA SPE=ON ABB=ON PLU=ON L21
 L36 7 SEA SPE=ON ABB=ON PLU=ON L25
 L37 60 SEA SPE=ON ABB=ON PLU=ON L11
 L38 143270 SEA SPE=ON ABB=ON PLU=ON L27
 L39 140282 SEA SPE=ON ABB=ON PLU=ON L30
 L40 2256613 SEA SPE=ON ABB=ON PLU=ON L31
 L41 2571 SEA SPE=ON ABB=ON PLU=ON (L32 OR L33 OR L34 OR L35 OR
 L36 OR L37) AND (L38 OR L39 OR L40)
 L42 QUE SPE=ON ABB=ON PLU=ON CHEMICAL VAPOR DEPOSIT? OR
 CHEMICAL VAPOUR DEPOSIT? OR CVP OR VAPOR DEPOSIT? OR
 VAPOUR DEPOSIT?
 L43 27 SEA SPE=ON ABB=ON PLU=ON L41 AND L42
 E VAPOR DEPOSITION PROCESS/CT
 L44 247082 SEA SPE=ON ABB=ON PLU=ON "VAPOR DEPOSITION PROCESS"+PFT,
 NT/CT
 L45 28 SEA SPE=ON ABB=ON PLU=ON L41 AND L44
 L46 31 SEA SPE=ON ABB=ON PLU=ON L43 OR L45
 L47 QUE SPE=ON ABB=ON PLU=ON FILM? OR THINFILM? OR LAYER?
 OR OVERLAY? OR OVERLAID? OR LAMIN? OR LAMEL? OR (MULTILAYER
 ?) OR SHEET? OR LEAF? OR FOIL? OR COAT? OR TOPCOAT? OR
 OVERCOAT? OR VENEER? OR SHEATH? OR COVER? OR ENVELOP? OR
 ENCAS? OR ENWRAP? OR OVERSPREAD?
 L48 30 SEA SPE=ON ABB=ON PLU=ON L46 AND L47
 L49 130 SEA SPE=ON ABB=ON PLU=ON (L32 OR L33 OR L34 OR L35 OR
 L36 OR L37) (5A) L47
 L50 5 SEA SPE=ON ABB=ON PLU=ON L49 AND L42
 L51 5 SEA SPE=ON ABB=ON PLU=ON L50 AND L41
 L52 30 SEA SPE=ON ABB=ON PLU=ON L48 OR (L50 OR L51)
 L53 18 SEA SPE=ON ABB=ON PLU=ON L52 AND (1840-2006)/PRY,AY,PY
 L54 565 SEA SPE=ON ABB=ON PLU=ON L41 AND L47
 L55 27 SEA SPE=ON ABB=ON PLU=ON L54 AND L44
 L56 0 SEA SPE=ON ABB=ON PLU=ON L55 NOT L52
 L57 16 SEA SPE=ON ABB=ON PLU=ON L55 AND (1840-2006)/PRY,AY,PY

FILE 'REGISTRY' ENTERED AT 10:30:36 ON 05 MAR 2010

L58 16 SEA SPE=ON ABB=ON PLU=ON L2 AND M/ELS

FILE 'HCAPLUS' ENTERED AT 10:31:06 ON 05 MAR 2010

L59 23254 SEA SPE=ON ABB=ON PLU=ON L58
 L60 1415 SEA SPE=ON ABB=ON PLU=ON L59 AND L42
 L61 1210 SEA SPE=ON ABB=ON PLU=ON L60 AND L47
 L62 1 SEA SPE=ON ABB=ON PLU=ON L61 AND (L32 OR L33 OR L34 OR
 L35 OR L36 OR L37)
 L63 1 SEA SPE=ON ABB=ON PLU=ON L60 AND (L32 OR L33 OR L34 OR
 L35 OR L36 OR L37)
 L64 49 SEA SPE=ON ABB=ON PLU=ON L59 AND (L32 OR L33 OR L34 OR
 L35 OR L36 OR L37)
 L65 1 SEA SPE=ON ABB=ON PLU=ON L64 AND L42
 L66 19 SEA SPE=ON ABB=ON PLU=ON L53 OR L62 OR L63 OR L65
 L67 0 SEA SPE=ON ABB=ON PLU=ON L57 NOT L66
 L68 19 SEA SPE=ON ABB=ON PLU=ON L66 OR L57